CEDAR-THOM

Record of Decision

USDA, Forest Service
Lolo National Forest
Superior Ranger District
Mineral County, Montana

November 2014

Lead Agency: USDA Forest Service

Responsible Official: Tim Garcia
FOREST SUPERVISOR

For Further Information, Contact: Tawnya Brummett, District Ranger
Superior Ranger District
Lolo National Forest
P.O. Box 460
Superior, MT 59872 (406) 822-3928

OR

Pat Partyka, Project Leader
Plains/Thompson Falls Ranger District
P.O. Box 429
Plains, MT 59859 (406) 826-4314

Cedar-Thom
Record of Decision

Table of Contents

1.0 Decision

As the Responsible Official for this project, I am authorizing **Alternative 5** from the Cedar-Thom Final Environmental Impact Statement (FEIS) for implementation.

Details of the Decision (additional information and a map are contained in Appendix C)

My decision includes:

Weed Treatments
Herbicide spraying of weeds along roadsides where needed on up to 140 miles of haul routes, new road construction, and drivable road segments to be stored or decommissioned.

Recreation Management

- Construction of a new Thompson Creek trailhead about a mile down the road from the existing trailhead
- Modification of the travel management designation on approximately 18.4 miles of the following trails to non-motorized use only to bring them into conformance with the Lolo Forest Plan:
    - Lost Lake Trail #112
    - Illinois Peak Trail #169
    - Oregon Lakes Trail #109
    - Bonanza Lake Trail #616
    - Thompson Creek Trail #173
    - Montreal Gulch Trail #163
    - Cedar Creek Driveway Trail #170
- Construction of a new non-motorized trail from Mink Peak to Lost Lake (1 mile). The user-created motorized trail will be closed and rehabilitated.
- Improvement of the Oregon Lakes trailhead to accommodate vehicle parking and turn-around needs

Watershed Restoration Projects

- Replacement of 9 road culverts with larger structures to improve stream flow and/or fish passage (see Appendix C)
- Rehabilitation of selected stream segments on California Gulch, Lost Creek, and Oregon Gulch that have been disturbed by past placer mining to accelerate the recovery process (see Appendix C)
- Removal of about a 100-foot segment of the historic Amador railroad grade that infringes on Cedar Creek, establishment of a floodplain bench, installation of rootwads or woody debris to deflect water away from the bank, and planting of riparian vegetation
- Planting riparian vegetation along the Cedar Creek Road (#320) where the road is located near the stream
- Removal of a failing culvert on a non-system road in Mary Ann Gulch

- Rehabilitation of the ford crossing on Cedar Creek in association with the decommissioning of Road 37237 (Cayuse Saddle road)

Vegetation Management

- Vegetation management using mechanical methods on about 6539 acres. On approximately 4398 of those acres, timber harvest will be used to achieve vegetation restoration and/or fuel reduction objectives. Within these areas, cut trees will be removed and sold. On the remaining 2141 acres, cut trees (generally less than seven inches in diameter at breast height) will be either left on the ground to decompose or would be piled and burned (see Appendix C for unit specific treatments).
- Prescribed burning on approximately 10,733 acres
  - Ecosystem maintenance (low severity) burning will be used on approximately 35 percent (3785 acres) of the total area that will be burned.
  - The remaining 6948 acres are mixed conifer forest types that contain a high proportion of dead trees. These sites had a historic fire return frequency ranging from 35 to 200 years and burned at mixed to stand-replacing severity. Not all of the acres indicated here or displayed on the map in Appendix C will be ignited. These acres represent the total area where forest stands are experiencing various stages of mortality and prescribed fire may be utilized to reduce existing fuels.

Road Management

- Construction of approximately 2.4 miles of temporary and 4.4 miles of long-term specified road consisting of multiple segments to access vegetation treatment areas.
- Maintenance of approximately 86 miles of road for project access and timber haul. In addition to blading, erosion control, and drainage improvements, Alternative 5 includes gravel surfacing, fill slope stabilization, dust abatement, and roadway narrowing for specific segments of Roads 320 and 7685 to reduce sediment delivery (see table below). Also, additional cross drains will be installed as necessary on the East Pierson Creek Road #7836 to prevent road surface erosion.

Additional Road Maintenance Treatments (Best Management Practices (BMPs)) Included in Alternative 5	Miles Treated
Cedar Creek Road (#320) M.P. 2.1 (end of pavement) -8.0 • Roadway Narrowing • Dust Abatement[1]	5.9
Cedar Creek Road (#320) M.P. 8.0-12.0 • Fill slope stabilization using gabions, plantings, or other appropriate measures	4.0
Cedar Creek Road (#320) M.P. 12.0-14.6 • Gravel Surfacing • Fill slope stabilization using gabions, plantings, or other appropriate measures	2.6
Lost Creek Road (#7865) M.P. 0.0 - 8.13 • Spot gravel surfacing where sediment delivery potential to stream is high • Dust abatement[1]	3.0
East Pierson Creek Road # 7836, from ridgeline between Thompson and Oregon drainages down to junction with Lost Creek Road (#7865) • Add drainage control structures and/ or shaping to prevent road surface from capturing runoff	2.0

[1]Dust Abatement will be applied every year heavy hauling is anticipated.

- Reconstruction of the switchback on Road 37116 to accommodate log truck traffic.
- Decommissioning of approximately 118 miles of road determined to not be needed for future use (see Appendix C for more details about level of closure).
- Storage of approximately 19 miles of road that have been identified as needed for long-term access, but not in the short-term.
- Installation of a gate on Road 16124 (California Gulch) at the junction with Road 388. This gate will also close Road 16561, which branches off of Road 16124. The gate will be closed yearlong to all public motorized traffic (Forest Plan Travel Map "A" restriction).
- Installation of a gate on Road 7823 (Mary Ann Gulch) at the junction with the Cedar Creek Road (#320). This action will close the entire Mary Ann Gulch road (1.9 miles) to public wheeled motorized vehicle traffic yearlong and will restrict snowmobiles to travel from October 15 to December 1 (Forest Travel Plan map "B" restriction).
- Addition of approximately 11 miles of the following existing, undetermined roads to the Forest transportation system: 37215, 37168, 37216, 37161, 37335, J70166, J70379, 37358, 37250, 37339, 37322, 37223, 37224, and 37225. Through the Travel Analysis process, these roads were identified as needed for long-term access. This will be an administrative change with no associated work on the ground.

Forest Plan Amendment:

My decision includes a site/project-specific Forest Plan amendment to allow timber harvest in Management Area (MA) 11 in three locations (Units 14, 15, and 17) to reduce hazardous fuels and restore ponderosa pine forest types adjacent to private land and residences (see Selected Action map in Appendix C). This is one of the areas identified within the Mineral County Community Wildfire Protection plan as a high priority for fuels reduction treatment. Together, these three units are approximately 183 acres in size.

Under the Forest Plan, this MA is managed as large blocks of roadless lands where tree cutting is "limited to that required to eliminate safety hazards or permit trail construction." The Forest Plan allows prescribed burning within this area "to restore the composition and structure of plant communities or for hazard reduction purposes" (Lolo Forest Plan, page III-33). However, the risk is unacceptably high to burn this area due to the current fuel condition and proximity to private land and residences. Alternative 5 will use a different tool (timber harvest) to achieve the same Forest Plan objectives (See Section 7.0 and Appendix D).

Endangered Species Act Consultation

In compliance with the Endangered Species Act, I consulted with the U.S. Fish and Wildlife Service (USFWS) regarding potential effects of the project to threatened species (bull trout, grizzly bear, and Canada lynx). The USFWS concurred with our finding that the project is not likely to adversely affect grizzly bear and Canada lynx. The USFWS also determined that the project will not likely jeopardize the continued existence of bull trout or result in the destruction or adverse modification of designated critical habitat. They documented their findings for bull trout in a Biological Opinion issued in April 2014. I have incorporated the terms and conditions from this Biological Opinion into this decision (refer to Appendix B).

Mitigation and Monitoring
I have also incorporated into my decision specific resource protection measures and a monitoring plan to avoid or minimize environmental harm from the activities authorized in the Selected Action. These requirements are listed in Appendix A.

As the Responsible Official for the Lolo National Forest, I am making site-specific decisions. This is not a general management plan for the area as would be found in a Forest Plan. The decisions I am making here do not preclude the need for future decisions to help meet the desired conditions for the Cedar-Thom project area. Future management of the area will be guided by the Forest Plan.

2.0 Background

The Cedar-Thom project is an integrated resource project that includes forest ecosystem restoration activities. In accordance with Forest Service Manual 2020, restoration activities are focused on establishing the composition, structure, pattern, and ecological processes necessary to make terrestrial and aquatic ecosystems sustainable, resilient and healthy under current and future conditions.

This project was developed to address restoration needs across the landscape and hazardous fuel conditions in the wildland urban interface adjacent to the community of Superior. The Northern Region Integrated Restoration and Protection Strategy identifies the Cedar-Thom project area as a high priority for restoration and maintenance of watersheds, wildlife habitats, resilient vegetation conditions, and protection of people, structures and community infrastructure in and associated with the wildland urban interface. The northeastern end of the Cedar-Thom project area, adjacent to the town of Superior, is identified in the Mineral County Community Wildfire Protection Plan (CWPP) as a high priority for fuels reduction treatment due to the potential wildfire risk. This area was specifically noted as having the highest community values at risk to wildfire within Mineral County.

In 2008, the Forest Service initiated the planning process for the Cedar-Thom project. In the past, to involve the public in the planning process, the Forest Service has typically developed a proposed action for an area and then asked the public to comment on it. With this project, because of the high level of public interest and proximity to Superior, the Forest Service engaged the public at the very beginning and asked them to participate in a collaborative process to develop the proposed action. Several individuals, including local residents and representatives of various organizations, volunteered to work with the Forest Service in this endeavor.

Three initial sideboards that the Forest Service set at the start of the process were that: 1) the collaborative participants had to remain diverse (representing a broad spectrum of natural resource and social interests); 2) the proposed action had to be consistent with laws governing resource management and the Forest Plan; and 3) the project had to be responsive to the 13 Restoration Principles developed by the Montana Forest Restoration Committee

(MFRC[1]). These principles are consistent with the goals and standards of the Lolo Forest Plan and current Forest Service policy described in Forest Service Manual 2020, which directs the use of ecological restoration to manage National Forest System lands in a sustainable manner.

Using a holistic, landscape-level approach, the Cedar-Thom collaborative participants and Forest Service resource specialists worked together for about a year to identify restoration needs and opportunities for the area. Their efforts resulted in the development of the Cedar-Thom project which focuses on five specific resource areas:

- Forest vegetation restoration
- Fuels reduction and reintroduction of fire
- Wildlife habitat improvement
- Aquatic restoration
- Recreation enhancement

3.0 Purpose and Need

The purpose and need for the project was derived from the differences between the desired landscape conditions and current conditions related to forest vegetation, fuels, wildlife and aquatic habitat, and recreation. See Chapter 1 of the FEIS for more detail. The purposes for conducting activities are to:

- Restore vegetative conditions that are resistant to undesirable effects of fires, insects, disease, and drought; resilient in response to those natural disturbances; and responsive to fundamental environmental shifts so ecological processes will sustain composition, structure, species, and genetic diversity in the future.
- Reduce forest fuels in wildland urban interface (WUI) and non-WUI areas and re-establish fire as a disturbance process on the landscape.
- Improve and maintain big game winter range.
- Enhance watershed health.
- Enhance recreation opportunities and establish trail travel management designations consistent with land management objectives.

4.0 Rationale for the Decision

I have made my decision based on the information in the FEIS, the supporting documentation in the project file, and consideration of issues and public comments. I have determined that my decision is consistent with all laws, regulations, and agency policy. I have considered the potential cumulative effects. I believe the Selected Action provides the best balance of management activities to respond to the purpose and need, while also being responsive to

[1] The MFRC is a non-profit, consensus-based collaborative group consisting of representatives of multiple conservation, industry, and user groups and state and federal land management agencies that found common ground in supporting restoration activities conducted to accelerate the recovery of ecological processes and to enhance societal and economic well-being.

issues and public input identified through the analysis process. I have adopted all practical means to avoid or minimize environmental harm from the Selected Action.

The criteria I relied upon to make my decision on this project included:

- Achievement of the project's purpose and need
- Relationship to environmental and social issues, and public comments

Meeting the Purpose and Need

The purpose and need for action and the desired conditions for the Cedar-Thom project area are based on Forest Plan goals and objectives and are supported by scientific rationale. All action alternatives achieve progress toward desired conditions and outcomes described in the Forest Plan and respond in various ways to the purpose and need for action. I believe Alternative 5 best achieves desired conditions and meets the purpose and need for action.

Vegetation Restoration

My decision will create forest conditions that are more resilient to future disturbance events because forest conditions within treated areas will have structures, density, and species composition that are adaptable and more sustainable over time. The Selected Action uses a landscape-scale approach to treat approximately 31 percent of the project area through various methods over about a 10-year period. The remainder of the area will be left to natural processes, although depending on conditions and time of year, naturally ignited fire may not be allowed to burn due to values at risk. Authorized restoration treatments in the Selected Action tie into previously managed areas which will create a mosaic of different patch sizes, age and size classes, and densities across the landscape similar to historic patterns caused by low and mixed severity fires in this fire dependent region.

Although the total number of acres of vegetation treatments is similar between the action alternatives, I selected Alternative 5 because the treatments have proven to be the most effective and efficient methods to achieve the vegetation restoration objectives based on available science and lessons learned on other projects in similar forest types and stand conditions. In Alternatives 3 and 4, some of these methods for the vegetation treatments were modified to be consistent with each alternative's specific criteria (i.e. no timber harvest within Inventoried Roadless Areas or old growth stands). Although these alternate treatment methods would make progress toward ecological objectives for each site, they would generally be less effective than the methods prescribed for those same treatment areas in the Selected Action.

I recognize that timber harvest is controversial to some people, particularly its use in restoration projects. However, it is one of the tools (often times one of the most effective and efficient tools) that we have to achieve desired vegetation restoration objectives. The trees cut and removed are a by-product of the restoration treatments. Vegetation treatments that can "pay their way" are less of a financial burden to taxpayers in achieving restoration goals. Although all vegetation treatment work (commercial and non-commercial) provides employment, commercial activities create a greater positive economic effect of jobs as raw materials are moved, processed, and developed into consumer goods. In addition,

commercial activities yield locally-produced wood products to the marketplace. Forest Service Manual 2020 and the Montana Forest Restoration Committee's Restoration Principles encourage the use of revenue from commercial uses of natural resources to help fund restoration activities.

The vegetation treatments in the Cedar-Thom project focus on restoring ponderosa pine, western larch, and whitebark pine forest types in the low and mixed severity fire regimes. As described in the FEIS, fire exclusion has altered much of this landscape so that most areas where fire historically would have burned at low or mixed severity would now likely burn at a high severity and at a larger scale. While there is general support for restoration treatments in the low severity fire regime comprised of dry, low elevation ponderosa pine/Douglas-fir forest types, there is less public acceptance for restoration treatments in the mixed severity fire regimes comprised of mid-elevation, moister mixed conifer forest types. Although there is a growing body of scientific literature supporting such treatments, some question the ecological need for restoration in mixed severity fire regimes. While I acknowledge the differing viewpoints, I believe it is important to conduct restoration treatments in the mixed severity fire regimes where needed because these fire regimes were historically dominant in this region. In addition, since this project was developed with a landscape-scale approach, I remain committed to meet restoration objectives specified in the purpose and need for this project.

I do not intend to treat everything, everywhere. In fact, I have eliminated from consideration about 2300 acres of vegetation treatments from the original proposal that was developed in 2009 for various reasons. One reason is that after further field review, my staff determined some of these areas already meet desired conditions and do not need treatment at this time. In the Selected Action, treatments and implementation methods are tailored to meet the specific needs of each site. Although the Selected Action covers approximately 31 percent of the project area (two-thirds of which will only be prescribed burning), there is still 69 percent that will be left to natural processes. I consider this a reasonable approach consistent with the recommendations in the scientific literature to use a mix of treatment intensities: no treatment in some areas, less intensive treatments (such as prescribed fire only) on other areas, and more intensive treatment involving mechanical methods in still other areas (Agee 2002).

Fuels Reduction

The Selected Action addresses community concerns regarding wildfire risks in the wildland urban interface (WUI) around residential areas near the town of Superior. I believe that the fuels reduction treatments along the Forest boundary are consistent with the Mineral County Community Wildfire Protection Plan and complement the current and future actions by local landowners to mitigate their risks to wildfire. Outside of WUI areas, vegetation restoration treatments will break up the fuel continuity within the project area that has developed since the beginning of fire suppression actions. These treatments will also moderate fire behavior within treated areas more consistent with historic conditions. Fuel modeling indicates that after implementation of the Selected Action, approximately 87 percent of all the treated acres will change from conditions that support mid to high severity fire behavior characteristics to conditions that represent lower severity fire. In 10-20 years, some of the treated areas would

evolve into conditions that represent mixed severity fire charcteristics. Within the alpine meadows (the remaining 13 percent), fire behavior characteristics will remain in their current condition. In contrast, if I chose to do nothing, existing conditions will continue to support mixed to high severity fire behavior characteristics. Because wildfires in this area have displayed a propensity for burning toward Superior and surrounding residential areas due to prevailing winds and topography, I believe the vegetation treatments in the Selected Action will reduce the potential for large fire growth and improve the ability to use suppression tactics that have a higher probability of success in protecting homes and community infrastructure.

The Selected Action will also reintroduce fire in a controlled manner under more desirable fuel and weather conditions to this fire-dependent landscape at a scale more consistent with historic patterns.

Wildlife – Winter Range

The Selected Action will improve forage conditions for deer and elk through prescribed burning on approximately 1525 acres of winter range areas. This action will complement the previously completed and/or authorized prescribed burning within the project area resulting in improved conditions for big game animals. The Selected Action will meet the Forest Plan objectives for this area as well as the project purpose and need by improving winter range.

Watershed Health

The Selected Action will result in a long-term improvement in water quality and aquatic habitat from road maintenance, physical decommissioning and storage treatments of road segments near streams, culvert replacements/removals, and the rehabilitation of stream segments affected by past disturbance. The road maintenance Best Management Practice (BMP) activities including gravel surfacing, fill slope stabilization, and roadway narrowing for select segments on the main valley bottom roads (#320 and 7865) within the project area will result in a long-term reduction in fine sediment delivery from existing roads. Six culvert replacements and one culvert removal will remedy existing barriers to fish passage and provide access to an additional 3.2 miles of upstream habitat.

Although all action alternatives would yield benefits to water quality and aquatic habitat, I chose Alternative 5 because it will provide the largest long-term reduction in fine sediment delivery from existing roads and the smallest short-term increase in sediment during project implementation (see FEIS, pages 2-32, 3-115). Since the additional road BMP measures listed in the paragraph above further address existing chronic sources of human-caused sediment compared to Alternatives 2, 3, and 4, the Selected Action will result in greater improvements to stream conditions, and egg and juvenile fish survival.

Recreation

The Selected Action will meet the project purpose and need to enhance recreation opportunities and establish consistent travel management designations on trails within the project area. Recreation enhancements described within the FEIS will be implemented as funding and staffing allows.

Consideration of Issues and Public Comments

In addition to the purpose and need, I also considered how well each alternative responds to the primary issues: potential effects to water quality and fisheries, roadless characteristics within Inventoried Roadless Areas; old growth; and wildlife security. The following section summarizes how my decision responds to these issues and other public comments.

Water Quality and Fisheries

The Forest Service identifies Cedar Creek as a priority watershed for bull trout, which is a listed Threatened species under the Endangered Species Act. Cedar Creek, Oregon Gulch, and Lost Creek are designated bull trout critical habitat (75 FR 63898, October 18, 2010). The State of Montana lists Cedar Creek as water quality limited due primarily to nitrogen from unknown sources (FEIS, page 3-99). Some common sources of nitrogen include human or animal waste and decaying plant matter, which are not something the Forest Service has control over in the Cedar-Thom project area. Although sediment is not listed as a source of impairment by the State, the project was designed to address fine sediment delivery from forest roads to improve habitat for native fish species.

To evaluate potential sediment delivery, roads and road-related actions within 300 feet of intermittent and perennial streams were initially modeled using WEPP:Road. This subset was used because literature suggests road segments at stream crossings and road segments located close to streams are generally responsible for the highest contribution of fine sediment from the road system (NASCI 2012, Woods et al. 2006, MacDonald and Coe 2006, Coe 2006). The initial modeling results showed a short-term increase in sediment delivery from roads during project implementation and a reduction in road-related sediment delivery below existing conditions following completion of the project for all action alternatives. These results were displayed in the Draft EIS (2011).

After publication of the Draft EIS, during Endangered Species Act (ESA) consultation for bull trout, the U.S. Fish and Wildlife Service expressed concerns related to the sediment modeling methodology because it analyzed only a portion of the road system (letter dated 12/9/2011). In response, the Forest Service re-ran the WEPP sediment model using a more conservative approach than suggested by research, including an intensified methodology in which all roads within the project area were assessed except for roads that are grown-in with vegetation and considered sediment-neutral. This was accomplished by using data from select representative road segments which was then extrapolated to the remaining road segments. The researcher who developed the WEPP:Road model indicated that this methodology was more thorough because more road segments were assessed; however he cautioned that it should not be characterized as more accurate due to level of detail of the model input information and because at best, WEPP's prediction of erosion rates is likely to be within +/- 50 percent of the mean (Elliot 2012, meeting presentation). The modeling results indicated a higher sediment yield from roads (both for the baseline condition and the Cedar-Thom project) than the initial analysis and displayed a similar trend to the previous modeling: a short-term increase in sediment delivery from roads during project implementation, and a reduction in road-related sediment delivery below existing conditions following completion of the project.

As ESA consultation continued, differing sediment modeling methodologies and concerns over bull trout resulted in another more conservative sediment assessment. This assessment assumed road BMP effectiveness diminishes more rapidly than what was previously modeled and reduced the effectiveness value of some prescribed BMPs. This modeling effort showed a trend similar to the first two modeling runs, but displayed a return to baseline conditions within a few years. Because of differing conclusions regarding long-term fine sediment conditions following project activities and resulting effects to bull trout and its habitat, the U.S. Fish and Wildlife Service asked the Forest Service to provide additional information to help interpret the results and complete their review.

Forest Service Regional Office subject matter experts in hydrology, fisheries, and aquatic ecology were requested to work with the Forest to review field conditions and analysis materials to provide a consensus opinion, similar to the Delphi method[2]. They focused particular attention on the road segments that were highlighted by the most recent sediment analysis as having the largest sediment contributions. Because some of the greatest concern was related to egg and juvenile fish survival, field review focused on road segments that were modeled to produce the largest sediment introductions closest to spawning reaches for fluvial bull trout. The field investigation allowed reviewers to compare visible evidence to modeled outputs. They looked at existing road surface conditions, visible erosion features, sediment depositional areas when they were present, and the proximity of stream segments to erosional features. The review team found some evidence of road generated erosion, but not in quantities large enough or broadly distributed enough to support the WEPP modeling results from the more conservative sediment assessment methodology. They concluded the WEPP model over-predicted sediment delivery for many of the road segments highlighted in the most conservative review because they found little evidence of connectivity to the stream network for most of the segments reviewed. However, they observed portions of the Cedar Creek Road #320 were under-predicted.

The comprehensive field review aided in the development of Alternative 5 and the identification of additional road maintenance actions for specific road segments to provide long-term improvements to fine sediment baseline conditions when the Cedar-Thom project is completed. These measures include gravel surfacing, dust abatement, roadway narrowing, cross drain installation, and fill slope stabilization for site-specific road segments.

Several studies indicate the majority of the road-related sediment introduced to streams comes from small definable areas that make up a relatively small percentage of the road network (Luce and Black 1999; Woods et al. 2006; Croke and Hairsine 2006; MacDonald and Coe 2007, NCASI 2012). These findings suggest that addressing these contributing sources can substantially reduce road-related sediment delivery. Thus, I believe the additional site-specific road maintenance actions (BMPs) included in Alternative 5 will reduce existing and project-induced, road-related sediment yield to Cedar Creek, Lost Creek, and Oregon Gulch from the Cedar Creek Road #320 and the Lost Creek Road #7865.

[2] The Delphi method is a systematic, interactive forecasting method which relies on a panel of experts to deal with a complex problem.

These two valley bottom roads are currently open year-round to public motorized travel. They were originally constructed nearly a century ago to provide access to the area for mining. These roads have since been improved, but their valley-bottom location makes them more prone to negatively interact with stream function and cause chronic sediment delivery. Because these roads access private land, residences, popular recreation sites, and active mine claims, I did not consider road closure or relocation out of the valley bottom to be socially or economically feasible options to address aquatic concerns. Thus, I included additional road maintenance (application of additional BMPs) in Alternative 5 to address sediment delivery problem areas. Numerous studies support the effectiveness of road BMPs to reduce soil erosion and delivery of road-related sediment to streams (NCSAI 2012). To ensure the effectiveness of road BMPs is maintained through the life of the project, I committed to the monitoring plan included in the U.S. Fish and Wildlife Service's Biological Opinion (see Appendices A and B).

Although the Final EIS indicates that all action alternatives would reduce sediment delivery over the long-term to varying degrees, Alternative 5 will provide the greatest reduction to the fine sediment baseline associated with existing roads once activities are completed (FEIS, page 2-32, 3-115). Compared to the other action alternatives, Alternative 5 will also yield the least amount of road-related sediment during project implementation due to the additional road improvements (FEIS, pages 2-32, 3-115). Vegetation treatments will not affect water quality because Riparian Habitat Conservation Areas and other best management practices will be applied to prevent sediment delivery to waterbodies. The Selected Action is consistent with Forest Plan standards and water quality laws.

The Cedar-Thom project will also accelerate the recovery of specific stream segments that are still affected by historic placer mining and railroad development. These projects will restore the integrity of the floodplain, and improve bank stability and fish habitat. Nine road culverts will also be replaced with larger structures to improve stream flow and fish passage. Approximately 3.2 miles of additional habitat will be provided as a result of these upgrades.

Due to the unavoidable temporary increase in fine sediment delivery primarily from projects intended to improve watershed conditions, the Selected Action, as well as the other action alternatives, was determined to adversely affect bull trout and designated critical habitat in the Cedar Creek watershed during project implementation. However, in the long term, Alternative 5 will result in an overall benefit to fisheries by improving aquatic habitat through rehabilitating some stream segments affected by past disturbance, reducing human-caused sediment delivery from existing roads, and remedying existing barriers to fish passage. The viability of species populations will not be affected. Through formal consultation, the U.S. Fish and Wildlife Service issued a Biological Opinion that determined the Cedar-Thom project will not likely jeopardize the continued existence of bull trout in the coterminous United States or result in the destruction or adverse modification of designated critical habitat (USFWS 2014).

In my decision, I am willing to accept minimal short-term effects associated with increased sediment delivery during implementation to provide an overall improvement in the resilience of the watershed as a whole. The magnitude of project-related short-term sediment delivery

will be low compared to existing conditions and will be within the natural variability considering seasonal variations and natural disturbance events (Megahan and King 2004). The intensity of the sediment effects will also be low based on the widespread nature of the actions and relatively small amounts of sediment delivered where they would occur (FEIS, page 3-115). From my review of the analysis in the Final EIS and Project File, I am confident that best management practices and resource protection measures used during project implementation will protect water quality and aquatic habitat. I believe the monitoring plan displayed in the FEIS and USFWS Biological Opinion (see Appendices A and B) will ensure best management practices remain effective through the life of the project.

Inventoried Roadless Areas

Approximately 47 percent of the National Forest System land within the project area is located within two Inventoried Roadless Areas (IRAs). Some of the IRA is truly roadless and other areas are "roadless" in name only because they have been developed with roads and previous timber harvest. The Lolo Forest Plan (1986) evaluated these areas for possible wilderness designation and allocated management direction as appropriate. Some areas were allocated to be managed as roadless lands. Other areas were allocated as suitable for development because they didn't rate high as potential candidates for future wilderness designation. The Cedar-Thom area contains both types of allocations.

There has been much public debate about how roadless areas should be managed. At the time the Cedar-Thom project was initially proposed, the 2001 Roadless Area Conservation Rule, which limits management activities in IRAs, was challenged in Court. In general for the Cedar-Thom project, most activities have not been raised as an issue by the public, but some concerns (and support) have been expressed about timber harvest treatments in the IRA. In response to these concerns, the Forest Service developed Alternative 3, which did not include any timber harvest in IRAs.

However, because the Cedar-Thom project was developed using a landscape scale approach, I recognized the approximate half of the project area that is in IRAs. The resource needs within this project area do not end at management and administrative boundaries, thus vegetation treatments within IRAs are an essential part of the project's landscape restoration goals to maintain or restore the characteristics of ecosystem composition and structure, reintroduce the ecological benefits of fire, and reduce the risk of uncharacteristic wildfire effects. My staff designed the project to be consistent with the 2001 Roadless Area Conservation Rule. I understand the different viewpoints regarding management of roadless areas and carefully considered the existing condition of the roadless areas, Forest Plan direction for these areas, and needs for treatment. I have decided to authorize timber harvest as well as road decommissioning, storage, and maintenance; non-motorized trail construction; prescribed burning; and noncommercial mechanical treatments within IRAs. My decision does not include any road construction or reconstruction within IRAs.

The Selected Action includes approximately 1145 acres of timber harvest in the Sheep Mountain-State Line IRA. All but 203 acres of harvest within the IRA will occur within the substantially altered portions of the IRA, which were developed after the area was designated an IRA in 1979 and prior to the adoption of the Roadless Conservation Rule in 2001.

Authorized timber harvest in these developed areas will occur between existing treatment units, many of which still appear as geometrically shaped patterns on the hillside even though they have regenerated with young trees. Existing classified roads will be used to access these harvest treatment areas. Authorized activities will not expand the existing substantially altered portion of the IRA.

Approximately 203 acres of thinning (Units 14, 15, 17, and a portion of Units 8 and 13) will occur within the Sheep Mountain-State Line IRA adjacent to private land in the wildland urban interface on the slope southwest of Interstate 90. Tree removal will primarily be accomplished with a helicopter (183 acre in Units 14, 15, and 17). Tractor skidding will be used to remove cut trees on the remaining 20 acres (a portion of Units 8 and 13) immediately adjacent to developed private and National Forest System lands. The thinning treatments will restore ponderosa pine forest types and reduce high concentrations of forest fuels near private residences. Although fire is the primary disturbance process in this forest type, wildfire has not been allowed to burn in this area due to the proximity of private land and homes. As a result, the stand conditions are likely much more dense than they would have been historically and are more likely to support high intensity, stand-replacing fires.

Timber harvest within the Sheep Mountain-State Line IRA is consistent with the Lolo National Forest Plan because harvest activities will occur within areas where the Plan allows timber harvest or where a site-specific Forest Plan amendment will allow harvest. Approximately 183 acres of thinning (Units 14, 15, and 17) adjacent to private land will occur within Forest Plan Management Area (MA) 11, where tree cutting is limited to that required to eliminate safety hazards. Within MA 11, prescribed burning is allowed to maintain or restore the composition and structure of plant communities, or for hazard reduction purposes. Prescribed burning cannot be safely or effectively used in Units 14, 15, and 17 due to current site conditions and proximity to private residences. Thus, I am authorizing mechanical fuel treatments in the form of timber harvest instead to achieve these same objectives of restoring ecosystem composition and structure and reducing hazardous fuels.

I have determined that the timber harvest authorized in the IRA is consistent with the 2001 Roadless Area Conservation Rule because tree cutting will involve generally small diameter trees to maintain or restore characteristic of ecosystem composition and structure (also see discussion of consistency with the Roadless Rule in Section 8.8 of this document).

As displayed in the FEIS in Section 3.11, the natural and undeveloped roadless characteristics are currently reduced within the substantially altered portions of the IRA due to previous development. Authorized commercial harvest activities will change the appearance of the individual treated areas due to reduced tree density and visible skyline corridors/tractor skid trails and tree stumps. These visual changes will vary from minor to more noticeable depending on the individual stand treatments. However, the modified appearance of these treated areas will not be in stark contrast to the surrounding landscape which already contains existing harvest units and classified roads. From a visual resource perspective, the authorized harvest treatments will help soften the edges of some of the existing geometrically shaped patterns, created by previous regeneration harvest. Over

several decades, the stumps would decay and vegetative regrowth would occur reducing the appearance of human manipulation.

The authorized harvest treatments would restore the historically characteristic diversity of stand conditions that resulted from mixed severity fire regimes (see FEIS, Section 3.2). The combination of authorized treatment areas, past treatment areas, and unmanaged areas will result in a variety of tree age classes and stand density and composition on the landscape that will mimic mosaic patterns created by wildfire, which will help to restore some of the natural quality of these previously altered areas within the IRA.

Authorized harvest on about 203 acres in the IRA adjacent to private land in the wildland urban interface will leave cut stumps, which will remain for several decades as evidence of harvest activities. However, thinning activities with tree removal primarily conducted by a helicopter will leave the stand with a more open appearance, but it will not likely be very noticeable to the casual observer. The more open stand conditions will be consistent with historic stand conditions, prior to the advent of fire suppression activities. Although stumps of cut trees will be evident to observers on the ground within the treatment areas, the overall natural and undeveloped character will, for the most part, remain unchanged.

In addition, authorized activities within the IRA will maintain or restore one or more of the roadless characteristics defined in 36 CFR Subpart B 294.11 (see FEIS, section 3.11 and Roadless report in the Project File). The Selected Action will not reduce the existing capability of the IRA to be suitable for wilderness recommendation. Regardless of how these roadless areas are managed in the future, the treatments I am authorizing in IRA will not irreversibly affect the existing roadless characteristics of the area.

Some comments I received suggested that roadless characteristics be restored in the substantially altered portions of the IRA and specific areas adjacent to IRAs. As part of this "roadless area restoration", a few comments recommended that I change the Forest Plan management allocation for these areas from suitable for development to unsuitable for development.

Although I considered an alternative to amend the Forest Plan to prohibit future development inside and specific areas outside the IRA (FEIS, page 2-27), I did not carry it forward. I believe changing the development suitability of National Forest System lands is most appropriately addressed during the Forest Plan revision process rather than on a project by project basis. The Forest Plan revision process, which is anticipated to begin in 2016, will allow a forest-wide assessment with full public participation over which areas on the Forest should be considered for development and which ones should not. I believe the Selected Action does not preclude any future modifications to development suitability designation of any of these areas because authorized activities will not irreversibly affect roadless characteristics or other environmental features. The Selected Action includes restoration actions in IRA and adjacent to IRA that meet the purpose and need for the project as described above in Section 3.0 of this document and in Chapter 1 of the FEIS. My decision does include the decommissioning of approximately 54 percent of the existing roads within the IRAs. This decommissioning is authorized for roads identified as no longer needed for

management as outlined in the Forest Plan and where it contributes to the restoration goals of the Cedar-Thom project (FEIS, page 2-24). Although not specifically designed to restore roadless characteristics, this action will contribute to a reduction of existing development in the IRA.

Old Growth

I received a few public comments concerning old growth. Primarily these comments opposed timber harvest treatments within old growth stands even when all individual old growth trees will remain standing on site. In response, the Forest Service developed Alternative 4 which does not include any harvest in old growth stands.

After careful consideration of the scientific literature, analysis displayed in the EIS and Project File, and monitoring of past treatments in old growth, I selected Alternative 5. The Selected Action will treat approximately 805 acres of existing old growth, which is about 26 percent of the existing old growth stands within the Cedar-Thom project area. Approximately 300 acres will be treated using timber harvest as a tool to maintain these stands and the remaining 505 acres will be treated with prescribed burning only. These stands were not specifically targeted for treatment because they contained old growth but because they fit within the project's restoration objectives for ponderosa pine and western larch. Only old growth stands dominated by early seral species that historically were protected from crown fire by repeated underburns which reduce ladder fuels and competition were proposed for treatment. Restoration treatments authorized in the Selected Action will reduce the crown fire hazard so that future wildfires are more likely to perpetuate the old growth stands instead of replacing them. My staff removed several old growth stands from the initial proposal after subsequent field reviews indicated they had not developed with interim disturbance.

I considered non-commercial mechanical treatments (e.g. hand slashing) as an alternative to timber harvest in some old growth stands. Although these types of treatments would incrementally move toward improving the resilience of old growth, they are generally less effective than treatments involving timber harvest, which remove the larger-sized fuel. Thus, I have decided to use timber harvest treatments on approximately 300 acres of various old growth stands (which represent only 10 percent of the old growth within the project area) to more efficiently and effectively achieve restoration objectives. Trees that will be removed are the ones that have established since the last fire, although some of the younger trees will be retained to provide both vertical structure and recruitment over time into the large, old age classes.

The Selected Action will maintain the amount of existing old growth within the project area at the watershed and forest scale because the treatments are designed to maintain old growth characteristics while (1) creating stand structures and composition similar to those that existed in each stand following disturbance in the past; (2) reducing the likelihood of high-severity wildfire; and (3) increasing the physiological vigor of old trees. Large, old trees will be retained, as well as snags and trees with evidence of cavity nesting, and downed woody material. Treatments within stands that currently meet the definition of old growth (Green et al. 1992, errata corrected 2005) will retain old growth characteristics after implementation

(FEIS, pages 3-43 through 3-44). Monitoring past similar treatments on the Lolo National Forest indicate that old growth characteristics were maintained in monitored stands (Brewer et al. 2008). I believe the authorized treatments will result in increased resilience to wildfire, insects, and disease and will perpetuate these old growth stands for a longer duration on the landscape than if I do nothing. The remaining 74 percent of existing old growth within the project area will go untreated and left to natural processes.

Wildlife Security

I received a few public comments that were concerned that some of the project proposals, including the ATV route development, new road construction and subsequent use, and timber harvest could reduce security for deer and elk. Partly in response to this concern, the Forest Service developed Alternative 4 which did not contain the ATV route development or any new long-term specified road construction. However, the evaluation in the FEIS displays that all action alternatives would slightly *increase* the amount of acres of elk security in the project area due to closures of currently open roads. The ATV route and new road construction were determined to not have any effect on elk security because these routes would be closed during the big game hunting season. The Selected Action does not include the ATV route and reduces the amount of new long-term specified road construction and timber harvest. All new long-term specified roads authorized by this Decision will be closed yearlong to public motorized traffic and thus will not affect elk security.

As described in the FEIS on page 3-244, the concept of elk security was created to address bull survival (Lyons et al. 1985, Hillis et al. 1991). Studies have shown that elk security may be one of the most important habitat factors in managing hunted elk populations. Security cover is not a natural habitat requirement for elk, but it allows bull elk to survive the hunting season and helps maintain desired bull to cow ratios. Elk security consists of hiding cover greater than 250 acres and more than ½ mile from any road open during hunting season (Hillis et al. 1991). Most of the new road construction will occur within ½ mile of an existing open road. As stated above, all of the newly constructed roads will be closed to public motorized traffic.

Road Construction

I received several comments concerned about the potential effects of new long-term specified road construction on the environment, including water quality, wildlife security, and wildlife habitat quality. I believe we have been responsive to this issue during the planning process. The Forest Service developed Alternative 4, which does not construct any new long-term specified roads. After publication of the Draft EIS, the Forest Service developed Alternative 5 to respond to public comment by dropping 1.5 miles of new road construction that are included in Alternatives 2 and 3. These dropped road segments contain stream crossings and are the only new road segments that modeling and field review indicated had the potential to deliver sediment to Cedar Creek. Throughout the planning process, the amount of new road construction has been reduced. When the initial project proposal was presented to the public in July 2009, there was approximately 5 miles of temporary roads and 6 miles of long-term specified roads, for a total of 11 miles. The Selected Action (Alternative 5) includes approximately 2.4 miles of temporary roads and 4.4 miles of long-term specified roads, a reduction of nearly 40 percent from the initial proposal.

After considerable thought, I have decided to authorize approximately 4.4 miles of new long-term specified road in multiple segments to provide long-term access to vegetation restoration treatment areas. I believe Alternative 5 best balances the concerns regarding new road construction and the need to efficiently meet the purpose and need to reduce forest fuels and restore resilient vegetative conditions. Even with 4.4 miles of new long-term specified road construction, there will be a net reduction of 44 percent in the miles of roads under Forest Service jurisdiction within the project area due to the authorized road decommissioning. None of the new road construction will occur within Inventoried Roadless Areas.

I understand the concern about new road construction, however, the effect that roads have on the environment is largely dependent on their design, location, condition, and amount of traffic. My staff carefully designed the new roads to provide adequate access with minimal environmental effects. New roads will be located in mid to upper slope locations, constructed to Best Management Practice standards, and closed yearlong to public motorized traffic. None of the new roads contain any stream crossings and modeling and field review indicates sediment delivery to Cedar Creek is unlikely (FEIS, page 3-112). Because the new roads will be closed yearlong to public motorized travel, there will be no adverse effects to wildlife security or habitat (FEIS, page 3-247).

I have decided to construct new roads in three areas for the following reasons:

Mary Ann Gulch
I authorized a total of approximately 3 miles of new road construction in two segments (7823ext and 18585ext) in the Mary Ann Gulch area to access vegetation restoration treatment units. This area contains a substantial amount of dead and dying lodgepole pine trees with a healthy larch component. The deterioration of these forest stands is increasing the risk that these stands will burn at a high severity in the future. It is also reducing the quality of habitat for some wildlife species, including deer, elk, and lynx. The most effective treatment is to remove some of the dead and dying trees, followed by prescribed burning to promote the larch on this site. Because of the deteriorated nature of the trees to be removed, helicopter yarding is not economically feasible, even in good market conditions. The new roads are necessary to access this area to implement the treatment. My staff assessed the possibility of using alternate treatment methods (e.g. prescribed burning or non-commercial mechanical treatment) but determined that these were not feasible given the condition of the area. In addition, there are some historic sites located within this area that I would like to preserve. My fuel specialists advised me that these sites cannot be protected from fire without some prior tree removal.

Some public comments suggested that temporary roads be constructed instead, but the slopes are generally too steep for the appropriate use of temporary roads. In addition, road access will be needed for post-harvest activities including prescribed burning, planting where needed, and follow-up exams. Since temporary roads are typically constructed and decommissioned in the same season, they are not adequate for this application. The authorized new roads are appropriately located if at some time in the

future there is a need to extend them to treat vegetation on the mid to upper slopes in the Rabbit Creek drainage to the north. If constructed in the future, these mid to upper slope roads would likely eliminate the need for some of the existing roads in lower Rabbit Creek that contain several stream crossings.

Montreal/California Gulch

The Selected Action includes a total of approximately one mile of new road construction in two segments within the Montreal/California Gulch area (16124ext and 16561ext). The new construction will provide access to larch restoration treatments in Unit 257 which will also reduce fuels adjacent to private land that contains summer cabins. This treatment area is comprised of dead and dying trees lodgepole pine trees amidst healthy larch and Douglas-fir trees. Field surveys indicate that this area was formerly an open larch stand. The current fuel conditions in this area suggest that a wildfire will burn at high severity. The most effective treatment is to remove some of the dead and dying trees to promote the larch on this site and reduce the potential for extreme fire behavior. I considered applying prescribed burning only, but due to the site-specific conditions it is not appropriate.

Some people suggested that temporary roads be constructed instead of long-term specified roads, but the slopes are generally too steep for the appropriate use of temporary roads. I also considered dropping all the new road construction in this area and using helicopter yarding instead to remove the material. However, similar to the situation in Mary Ann Gulch, helicopter yarding is economically infeasible at the present time. Having road access significantly increases the likelihood that the treatment can be implemented in a timely manner. If I wait unit the market improves enough for helicopter yarding to be feasible, the material will likely have little value due to deterioration, which diminishes the likelihood of implementation. I am willing to take that chance with Unit 56 (the unit immediately to the east), but since Unit 257 is adjacent to private land, I believe it is prudent to implement this treatment sooner rather than later (or in a worst case, not at all).

I decided to gate these roads rather than place them into storage to provide access for fire suppression activities in proximity to private land in the event of a wildfire. My staff determined that there would be no measurable resource benefits from storing the roads as opposed to gating them. These roads are dry and have no water crossings. The prisms will be grass-seeded to minimize the potential for erosion and weed establishment. Gates will prohibit public motorized access yearlong.

I received a few comments that expressed concern the new roads will intrude into an area that currently doesn't contain any roads, which the commenters believe will affect the ecological integrity of the area, specifically water quality, quiet recreation, and wildlife security. Alternative 5 partially addresses the issue of intrusion into the area that currently doesn't contain existing roads by reducing the length of the new road construction by half compared to Alternatives 2 and 3. The new road construction in this area will occur within approximately 2500 feet of private land, existing roads, and past harvest units. Due to the intense human activity within the Cedar Quartz Historic Mining

District in the late 1800s/early 1900s, this area has been affected by the presence of man even though it doesn't contain any National Forest System roads and may appear untouched from a distance (FEIS, page 3-299). The new road construction will not affect water quality because the roads will be located at mid to upper slope and on dry terrain with no water crossings. As stated above the roads will be gated yearlong which will maintain elk security. These roads would have little effect to quiet recreation because they will extend about 2500 feet off the end of roads that have been open year-round to public motorized use. The Selected Action changes the travel management designation on the roads (#16124 and 16561) from which these new roads will originate from open to closed yearlong. The nearest trail is about mile to the east and is currently open to motorcycles, but will be closed year-round to motorized use by this Selected Action.

Thompson Peak

I also decided to authorize the construction of an additional ¼ mile of road off the end of an existing road in the Thompson Peak area (37168ext) to access a ponderosa pine restoration treatment unit (#5). Since the road was determined to be needed for continued maintenance of the vegetation in the future, it will be placed into storage following use for this project.

Helicopter Logging

As stated previously, the Cedar-Thom project was developed using a landscape scale approach. Some of the areas identified for treatment do not have roaded access. Several of these inaccessible treatments areas require some tree removal to best meet vegetation restoration and fuels reduction objectives, thus helicopter yarding was prescribed. When my staff developed this project, they recognized that helicopter yarding was not economically feasible at that time. However, some helicopter yarding was included in the project because restoration needs were identified in these areas and my staff predicted that the market would improve over time. Unfortunately since the inception of this project, the market has not improved to the point where it will likely carry the cost of helicopter yarding any time soon. Regardless, I have included some helicopter yarding in my decision because the treatment needs still exist and I have already made an investment in the planning and environmental review of these areas, which determined restoration activities are appropriate and will not cause adverse environmental effects. These helicopter treatment areas will be implemented when market conditions improve or if additional funding becomes available to supplement the cost of the prescribed activity.

Other Considerations

The Selected Action is a modification of the initial proposed action that was developed collaboratively with the public. I have been very pleased about our collaboration with area residents and other interested parties. Although the planning of this project took longer than anticipated, I sincerely appreciate the continued commitment and support of the collaborative participants and local community. Together we have invested a lot of time and energy to design an integrated restoration project that addresses the identified purpose and need at a landscape scale, protects environmental resources, and is consistent with the Forest Plan,

regulatory laws, other Agency policy, and the Montana Forest Restoration Committee's Restoration Principles.

I believe it is important for the Forest Service to support local communities especially where the agency manages the majority of the land base as it does in Mineral County. I have decided to proceed with the Selected Action because in addition to achieving the stated purpose and needs of the project, it will contribute both directly and indirectly to the economy of Mineral County and surrounding areas.

Another consideration in my decision is that harvest treatments will yield various wood products to local and regional forest industries as a by-product of achieving project objectives. In doing so, the Selected Action will also contribute to the maintenance of a forest industry infrastructure, which provides employment, benefitting local communities, and markets for forest products that result from restoration and other projects. I recognize the need for a strong forest industry to help accomplish forest restoration and other vegetation treatments now and in the future. The forest industry also lowers the direct cost of restoration projects to the taxpayer by providing markets for the wood products that result from these types of projects.

5.0 Public Involvement and Collaboration

Project Development and Collaboration

On March 4, 2008, the Superior District Ranger drafted a letter to notify the public that the Forest Service was in the initial stages of developing a project for the Cedar-Thom area. This letter, which also served as an invitation to a public meeting, was sent to approximately 300 adjacent and nearby landowners, people who have mine claims within the project area, and individuals and groups who have previously requested to be notified of similar projects. Fifty-seven written responses were received. Most of these responses were requests to be kept informed of project developments and the rest provided management recommendations for the area.

On March 19, 2008, the Forest Service held a public meeting to share information about the project area and to encourage interested people to participate in a collaborative effort to develop proposed actions for the Cedar-Thom area. Approximately 40 people attended the meeting and 17 people signed up to participate in the collaborative process. Beginning in April 2008, collaborative meetings were held monthly for nearly a year. These efforts resulted in the development of a proposed action for the project.

Scoping

On July 30, 2009, a letter soliciting comments on the proposal was mailed to 115 individuals and organizations, including landowners within and near the project area. This letter along with maps of the proposal was posted on the Lolo National Forest website.

A Notice of Intent (NOI) to complete an environmental impact statement was published in the Federal Register on August 7, 2009. The NOI asked for public comment on the proposal for 30 days from the date of publication.

Twenty responses were received from individuals and organizations. Using these comments, the Forest Service developed a list of issues to address. The Forest Service then used these issues to develop alternatives to the proposed action (see Section 6.0 of this document and Chapter 2 of the FEIS). On October 23, 2009, the Forest Service sponsored a public fieldtrip to the project area to provide an update on the project and to discuss the issues raised in public comments.

Draft Environmental Impact Statement

On January 19, 2011, the Cedar-Thom Draft Environmental Impact Statement (DEIS) and/or its summary was mailed to about 90 individuals, special interest groups, and agencies. Legal notices announcing the availability of the DEIS were published in the *Missoulian* and *Mineral Independent* newspapers on January 28th and 26th, respectively. The Notice of Availability was published in the Federal Register on January 28, 2011, which began the 45-day comment period. Also, the DEIS was posted on the Lolo National Forest website. Twenty-two comment letters were received, which included one that was signed by 31 local residents. The Forest Service's responses to those comments are contained in Chapter 6 of Final Environmental Impact Statement.

Final Environmental Impact Statement

In November 2014, the Final Environmental Impact Statement (FEIS) and/or its summary and this Record of Decision were mailed to the individuals, groups, and government agencies who requested them and/or commented on the DEIS.

U.S. Fish and Wildlife Service Consultation

A Biological Assessment which assessed the impact of the proposed action on the threatened bull trout was sent to United States Fish and Wildlife Service (USFWS) for formal consultation under Section 7 of the Endangered Species Act. The conclusion of the Assessment was that the action may adversely affect (short-term impairment of potential habitat, but long-term habitat improvement) bull trout and designated critical habitat. The USFWS issued a Biological Opinion in April 2014 and determined the Selected Action will not likely jeopardize the continued existence of bull trout in the coterminous United States or result in the destruction or result in the destruction or adverse modification of designated critical habitat.

A Biological Assessment (BA) which assessed the impact of the Selected Action on the threatened Canada lynx was sent to USFWS for review. The determination of the BA was that the action is not likely to adversely affect this species. USFWS concurred with this finding.

In April 2014, the USFWS also concurred with our finding that the Selected Action would not adversely affect grizzly bears.

6.0 Alternatives

The issues raised in the public involvement guided the Forest Service to develop alternatives to the proposed action. Five alternatives, including the no action alternative were considered in detail in the FEIS. All action alternatives are consistent with the Lolo National Forest Plan (1986). All action alternatives also meet the purpose and need for the project and would result in improvements to water quality, stream function, aquatic habitat, elk security, winter range habitat for deer and elk, and resilience of ponderosa pine, western larch, and whitebark pine forest types. For a complete description and comparison of these alternatives, refer to Chapter 2 of the FEIS.

Alternative 1: Under the No Action alternative, no restoration, fuels reduction, or recreation enhancement activities would be implemented to accomplish project goals. However, ongoing forest management activities would continue. Previously authorized projects, recurrent roads and facility maintenance, and other approved Forest management activities would continue under current management direction.

Alternative 2: This alternative is a modification of the original proposed action that was developed collaboratively with a diverse group of interested parties.

Alternative 3: This alternative modifies Alternative 2 by removing all timber harvest activity in Inventoried Roadless Areas in response to issues regarding activities in Inventoried Roadless Areas and concerns about potential effects to roadless character.

Alternative 4: This alternative modifies Alternative 2 by removing all timber harvest activity in existing old growth forests (as defined by Green et al. 1992, errata corrected 2005). This alternative also does not construct long-term specified road construction or an ATV route in response to concerns about potential effects on water quality, wildlife security, old growth forests and old growth associated wildlife species.

Alternative 5: This alternative was specifically developed to address concerns expressed by the U.S. Fish and Wildlife Service about sediment delivery from existing roads and its effects to bull trout and aquatic habitat. This alternative also responds to public comments about proposed new road construction, timber harvest within the Sheep Mountain-Stateline Inventoried Roadless Area, and development of an ATV route.

I also considered six other alternatives, including the original proposed action, that were dismissed from detailed study for various reasons. For a detailed discussion of these alternatives, refer to Chapter 2 in the FEIS, pages 2-23 through 2-27.

The Council on Environmental Quality regulations for implementing NEPA specifies that the alternative or alternatives that are considered to be environmentally preferable be identified (40 CFR Part 1505.2b). The environmentally preferable alternative is not necessarily the alternative that will be implemented and it does not have to meet the underlying need of the project, but is ordinarily the alternative that causes the least damage to the biological, and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources (Section 101 NEPA: 40 CFR 1505.2(b) and 36 CFR 220.3). The Selected

Action (Alternative 5) has been identified as the environmentally preferred alternative. It includes additional road maintenance work to effectively reduce existing and project-related sediment delivery from existing roads. In addition, the Selected Action employs the most effective means for achieving vegetative restoration objectives while improving various wildlife habitats and maintaining security.

7.0 Determination of Non-Significant Forest Plan Amendment

My decision amends the Lolo Forest Plan to allow timber harvest on approximately 183 within Units 14, 15, and 17 located in Management Area 11. Management Area 11 consists of large blocks of roadless lands distinguished primarily by their natural environmental character. The Forest Plan limits tree cutting in this area to that required to eliminate safety hazards or permit trail construction. The purposes of the harvest treatment in this area are to reduce hazardous fuels and restore ponderosa pine forest types adjacent to private land and residences. Trees designated for removal within these units will be extracted with a helicopter. This wildland urban interface area is identified in the Mineral County Community Wildfire Protection Plan as a high priority for fuels reduction treatment. The Forest Plan does allow prescribed burning within this area "to restore the composition and structure of plant communities or for hazard reduction purposes" (Lolo Forest Plan, page III-33). However, the risk is unacceptably high to burn this area due to its current fuel condition and proximity to private land and residences. This amendment will allow the use of a different tool (timber harvest) to achieve the same objectives.

Although fire is the primary disturbance process in this forest type, wildfire has not been allowed to burn in this area due to the proximity of private land and homes. As a result, the stand conditions are denser than they would have been historically. These dense stand conditions have a high probability of leading to uncharacteristic wildfire conditions and are more likely to support stand-replacing fires that are not typical in these forest types. Due to fire exclusion and natural vegetative progression, the natural environmental character has been altered. Authorized treatments will result in stand characteristics that are more consistent with historic stand conditions in existence prior to the advent of fire suppression actions.

This has been determined to be a non-significant Forest Plan amendment because the treatment it allows meets Forest Plan objectives, the area it affects is relatively small (approximately 183 acres), and it only applies to this project.

8.0 Findings Required by Law, Regulation and Policy

I have determined that my decision is consistent with the laws, regulations, and agency policies related to this project. The following summarizes findings required by major environmental laws.

8.1 The National Environmental Policy Act (NEPA)

NEPA requires Federal agencies to: (a) use a systematic interdisciplinary approach in planning and decisionmaking; (b) consider the environmental impact of proposed actions; (c) identify adverse environmental effects which cannot be avoided should the proposal be implemented; (d) consider alternatives to the proposed action; (e) consider the relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity; and (f) identify any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

I find that the Cedar-Thom project analysis process and documentation is consistent with NEPA.

8.2 The National Forest Management Act (NFMA)

On April 9, 2012 the Department of Agriculture issued a final planning rule for National Forest System land management planning (2012 Rule) 77 FR 68 [21162-21276]). None of the requirements of the 2012 Rule apply to projects and activities on the Lolo National Forest, as the Lolo Forest Plan was developed under a prior planning rule (36 CFR §219.17(c)). Furthermore, the 2012 Rule explains, "[The 2012 Rule] supersedes any prior planning regulation. No obligations remain from any prior planning regulation, except those that are specifically included in a unit's existing plan. Existing plans will remain in effect until revised" (36 CFR §219.17).

■ Consistency with Forest Plan Standards, Goals, and Objectives

The NFMA requires that projects and activities be consistent with the governing Forest Plan (16 USC 1604(i)). The Lolo National Forest Plan (1986) establishes management direction for the Lolo National Forest. This management direction is achieved through the establishment of Forest Plan goals and objectives, standards and guidelines, and Management Area goals and accompanying standards and guidelines.

This decision is consistent with the standards, goals, and objectives of the Lolo National Forest Plan (USDA Forest Service 1986). This decision includes a site-specific, non-significant Forest Plan amendment to allow timber harvest on approximately 183 acres within an area allocated in the Forest Plan to be managed as large blocks of roadless lands where tree cutting is "limited to that required to eliminate safety hazards or permit trail construction." See Section 7.0 above and Appendix D for more information.

■ Suitability for Timber Production

No timber harvest, other than salvage sales or sales to protect other multiple use values, shall occur on lands not suited for timber production [16 USC 1604 Sec.6 (k)].

The Lolo National Forest Plan identifies which Management Areas are suitable for timber production and which ones are not. Most of the timber harvest authorized in this Decision will be located within areas classified as suitable for timber production. However, approximately 371 acres of timber harvest will occur within areas classified in the Forest Plan as unsuitable for timber production although tree cutting is allowed for various reasons. None of the timber harvest included in the Cedar-Thom project is for the purpose of timber production, which is defined in the Forest Plan as "the purposeful growing, tending, harvesting, and regeneration of rotational crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use". Although wood products would be a by-product of restoration objectives achieved through harvest activities, the harvest is designed to meet other management objectives (vegetative restoration and/or fuels reduction) consistent with the Forest Plan management areas in which they are located. This is consistent with NFMA because the timber harvest will be implemented "to protect other multiple use values". Although, the following treatment areas are located within Forest Plan management areas classified as unsuitable for timber production, authorized timber harvest activities are consistent with the Forest Plan as described below:

- Units 14, 15, and 17 (183 acres) are located within Management Area 11, which is described in the Forest Plan as consisting of large, roadless blocks of land distinguished primarily by their natural environmental character. Management Area 11 is classified as unsuitable for timber production – tree cutting is limited to that required to eliminate safety hazards or permit trail construction. The Forest Plan does allow prescribed burning to maintain or restore the composition and structure of plant communities, or for hazard reduction purposes. However, the risk is unacceptably high to burn this area due to its current condition and location. Thus, timber harvest with tree removal to be conducted by a helicopter is proposed as a different tool to achieve the same Forest Plan objectives. The purposes of these treatments are to manage fuel conditions in the wildland/urban interface immediately adjacent to private land and to restore resilient ponderosa pine and larch stands. As described above, this decision includes a site-specific, non-significant Forest Plan amendment to allow timber harvest in these three treatment areas.
- Units 80 and 81 (about 118 acres) are located within Management Area 9, which is described in the Forest Plan as areas that receive concentrated public use. This management area is classified as unsuitable for timber production – tree removal is limited to that required to eliminate safety hazards or permit road or trail construction or *meet other management objectives.* Although these units are adjacent to the Cedar Creek Road #320, which is open yearlong to public motorized traffic, it is unclear as to why this area is mapped as MA 9. It is likely a mapping error in the Forest Plan. Regardless, consistent with the Forest Plan, the purpose of the authorized timber harvest in these units is to meet other management objectives, which in this case is to restore resilient larch stands. Unit boundaries will be tied into natural features to protect the visual quality that is important in this management area. This authorized harvest is also consistent with the NFMA because the purpose is not for timber production but to protect multiple use values.

- Portions of Units 111 and 112 (approximately 40 acres) are located within Management Area 27, which is classified as unsuitable for timber production in the Forest Plan because timber management is considered not economically or environmentally feasible at this time due to the physical features of these land parcels. However, the District silviculturist and Forest soil scientist conducted field reviews and determined that timber harvest is economically and physically feasible with conventional equipment from existing roads. This area is an unmapped inclusion of suitable land within mapped MA 27. The objectives of these treatments are to restore resilient ponderosa pine and larch stands.
- A portion of Unit 67 (25 acres) is located within Management Area 1, which is described in the Forest Plan as un-forest or noncommercial timber land. MA 1 is classified as unsuitable for timber production, although the removal of dead, dying, or high hazard trees is permitted. The objective of the harvest activity authorized in Unit 67 is to restore a resilient whitebark pine stand by reducing the amount of dead and dying trees while retaining existing whitebark pine and planting blister rust-resistant whitebark pine seedlings. Thus timber harvest in this location is to meet other resource objectives (i.e. restoration of whitebark pine), not for the purpose of producing timber.
- A small portion of Units 108 and 109 (about 5 acres) are located within Management Area 4, adjacent to the historic Golden Sunset mine. Although the area around the mine and remaining structures will be buffered from harvest activities, a small portion of mapped MA 4 will likely be included in Units 108 and 109. MA 4 is described in the Forest Plan as lands in the immediate vicinity around active or recently active mineral extraction and processing operations. Although there are mine claims within the area, no active mining is occurring or has recently occurred here. The Forest Plan classifies this management area as unsuitable for timber production. Although tree removal is limited to that required to eliminate safety hazards or permit road construction, prescribed burning is allowed to maintain or restore the composition and structure of plant communities. The harvest treatments followed by prescribed burning are intended to restore resilient larch stands by removing dead and dying trees while retaining and planting larch. Prescribed burning alone without prior removal of some of the standing trees assumes a high level of risk to residual larch trees and historic structures and may not achieve resource objectives. In addition, removal of dead and dying trees will reduce the safety hazards posed by falling trees and the future buildup of hazardous fuels around the mine area.

Stands identified for harvest treatment were examined by a Certified Silviculturist, Soil Scientist, and other resource specialists, who determined the lands are physically suited for timber harvest.

■ Timber Harvest

All projects that involve timber harvest for any purpose must comply with four requirements found in 16 USC 1604 Sec.6 (g)(3)(E). I find that the prescribed treatments involving timber harvest shall only occur on lands where:

(i) *Soil, slope, or other watershed conditions will not be irreversibly damaged.*

The Forest Service fully assessed the potential effects of timber harvest on soil and water resources. Their analysis is documented within the Soil, Hydrology, and Fisheries sections of both the FEIS and Project File. The Selected Action avoids impairment of site productivity and will result in a long-term improvement to water quality. This determination is supported by disclosures in the above sections of the FEIS and the application of BMPs (refer to FEIS, Appendix C) to help prevent the loss of soil or reduction in water quality. The effectiveness of BMPs is discussed in the EIS (pages 3-109 through 3-111). Field inventories and analysis verified that the selected treatments will meet Regional soil quality standards.

(ii) There is assurance that such lands can be adequately restocked within five years after harvest.

Within the Cedar-Thom project area, establishment of regeneration on past even-aged harvest units has successfully occurred within the five year time frame or follow-up planting or other actions have been implemented, resulting in certifiably stocked stands. With this local history of successful regeneration and the planned silvicultural treatments, I am assured that treatments involving even-aged harvest in the Cedar-Thom project will be restocked within the required time frame.

(iii) Protection is provided for streams, stream-banks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperature, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat.

Upon review of the Cedar-Thom FEIS, I find that the timber harvest activities associated with the Selected Action will comply with applicable Clean Water Act and Montana State Water Quality standards and the standards and guidelines of the Lolo National Forest Plan. As documented in the FEIS, Hydrology and Fisheries sections, restoration and/or fuel treatments involving timber harvest will not adversely affect water conditions or fish habitat. Application of BMPs and Riparian Habitat Conservation Areas will protect water resources from harvest activities. Other project activities, such as physical road storage and decommissioning treatments, application of road BMPs, and replacement/removal of culverts will provide long-term improvement in water quality and remedy existing fish passage barriers.

(iv) The harvesting system to be used is not selected primarily because it will give the greatest dollar return.

The Economics section is the Cedar-Thom FEIS describes the economic effects. The decision to implement the Selected Action was based on a variety of reasons as discussed earlier in this document. Economics was one of the many factors I considered.

■ Clearcutting and Even-aged Management

When timber is to be harvested using an even-aged management system, a determination that the system is appropriate to meet the objectives and requirements of the Forest Plan must be made and, where clearcutting is to be used, must be determined to be the optimum method.

a. For clearcutting, it is determined to be the optimum method, and for other such cuts it is determined to be appropriate, to meet the objectives and requirements of the relevant land management plan. [16 USC 1604 Sec.6 (g)(3)(F)(i)]:

Unit 559 (17 acres) is prescribed for clearcutting. It is a dense thicket of 100-year old lodgepole pine that ranges from 2 to 8 inches in diameter. There is little chance of these trees responding to intermediate treatments. There are no trees of sufficient size or quality for seed trees. Uneven-aged management is not a viable option. This 17-acre stand will be clearcut, burned, and planted to restore a healthy, productive forest containing a mixture of western larch and other species.

Within the Cedar-Thom project, even-aged harvest treatments are prescribed for areas that have extensive existing mortality due primarily to insects, and in a few cases, extensive root disease. Removal of dead and dying trees is intended to restore resilient larch stands. I have determined that the silvicultural systems in the Selected Action are appropriate to meet the objectives and requirements of the Forest Plan.

b. The interdisciplinary review as determined by the Secretary has been completed and the potential environmental, biological, esthetic, engineering, and economic impacts on each advertised sale area have been assessed, as well as the consistency of the sale with the multiple use of the general area. [16 USC 1604 Sec.6 (g)(3)(F)(ii)]:

Refer to the Cedar-Thom EIS and Project File. Full interdisciplinary review has been completed for this project. All treatments meet a portion of the multiple use goals and objectives in the Lolo Forest Plan for designated Management Areas.

c. Cut blocks, patches or strips are shaped and blended to the extent practicable with the natural terrain [16 USC 1604 Sec.6 (g)(3)(F)(iii)]:

Cutting units were designed to blend with the natural environment as much as possible and meet visual quality objectives.

d. Cuts are carried out according to the maximum size limit required for areas to be cut during one harvest operation, provided, that such limits shall not apply to the size of areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm [FSM Region 1 supplement 2400-2001-2-2471.1, 16 USC 1604 Sec.6 (g)(3)(F)(iv)]:

Within the Cedar-Thom project, four treatment areas will result in openings that exceed 40 acres in size, the maximum generally allowed by Forest Service Manual 2470, Section

2471.1, Region 1 Supplement 2400-2001-3. All of these treatment areas are the result of mortality caused by mountain pine beetles and are thus not subject to this requirement.

e. Such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource [16 USC 1604 Sec.6 (g)(3)(F)(v)]:

Documentation of the effects on other resources is contained in the Cedar-Thom EIS and Project File. Protection of all resource values is maintained. All sites considered for treatment will use established harvest and fuel reduction methods. Treatments are designed to sustain and perpetuate native seral species. Resource Protection Measures (Appendix A) and applicable Best Management Practices will be sufficient to protect soil and water resources. As stated above, regeneration on past even-aged harvest units within the Cedar-Thom project area have successfully occurred. With this local history of successful regeneration and the planned silvicultural treatments, I am assured that treatments involving even-aged harvest in the Selected Action will be restocked within the required time frame.

■ Necessity of Roads

The NFMA requires that the necessity of roads be documented and that road construction be designed to "standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources" [16 USC 1604 Sec.8]. NFMA also requires that "all roads are planned and designed to re-establish vegetation cover on the disturbed areas within a reasonable period of time, not exceed ten years…unless the road is determined necessary as a permanent addition to the National Forest Transportation System" [16 USC 1604 Sec.8]. A transportation plan was completed for the project area that analyzed current and future transportation needs. In order to access treatment areas, I have decided to construct approximately 2.4 miles of temporary road and 4.4 miles of long-term specified road in multiple segments. All new roads will be constructed to best management practice standards. Long-term specified roads are needed for future land management. Temporary roads are needed to access the vegetation treatments and then will be reclaimed after use and will be revegetated within ten years. The completed environmental assessment documented in the Cedar-Thom EIS and Project File determined that the construction of new roads will not have significant impacts on the land or resources.

Based on these actions and analyses, I believe the Selected Action meets the intent of the NFMA road requirements.

I have also decided to decommission 118 miles and store 19 miles of existing road. Roads to be decommissioned are not needed for the future transportation system. Roads to be stored are not needed for the next 20 plus years, but are necessary components in the long-term transportation system. These roads will be stored in as much an environmentally benign condition as possible to reduce resource impacts but will be available for future use.

Although I am authorizing the construction of 4.4 miles of long-term specified road, there will be a net reduction of 44 percent of road miles under Forest Service jurisdiction within the Cedar-Thom project area due to the road decommissioning authorized in this Decision.

■ Sensitive Species

Federal law and direction applicable to sensitive species include the National Forest Management Act and the Forest Service Manual (2670). The National Forest Management Act directs that guidelines for land management plans provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives [16 USC 1604 Sec.6 (g)(3)(B)]. The Lolo National Forest Plan contains standards for sensitive species. The Regional Forester has approved the sensitive species list – those plants and animals for which population viability is a concern (FSM 2670.5). In making my decision, I have reviewed the analysis and projected effects on all sensitive species listed as occurring or possibly occurring on the Lolo National Forest (FEIS, Chapter 3, Wildlife, Fisheries, and Botany sections; and the Biological Evaluations in the Project File). I concur with the findings documented for these species. The findings document that the Selected Action will have no adverse impacts on sensitive species.

8.3 The Clean Water Act and State Water Quality Standards

Upon review of the Cedar-Thom FEIS (Chapters 2 and 3, and Appendix C), I find that activities associated with the Selected Action will comply with applicable Clean Water Act and Montana State Water Quality standards through application of Best Management Practices and additional watershed and stream channel improvement activities that will reduce the amount of sediment being transported to project area streams over time and remedy fish passage barriers. Prior to implementation, all necessary permits will be acquired. An in-depth discussion of the effects on aquatic resources can be found in the Hydrology and Fisheries sections of Chapter 3 of the FEIS and reports in the Project File.

8.4 The Clean Air Act

Upon review of the FEIS (Chapter 3), I find that the selected activities in my decision will be coordinated to meet the requirements of the State Implementation Plans, Smoke Management Plan, and Federal air quality requirements.

8.5 The Endangered Species Act (16 USC 1531 et. seq.)

Under provisions of this Act, Federal agencies are directed to seek to conserve endangered and threatened species and to ensure that actions are not likely to jeopardize the continued existence of any of these species. My decision is consistent with the Endangered Species Act. Pursuant to Section 7 of the Act, my staff prepared biological assessments, which disclose effects of the project on listed species, and consulted with the U.S. Fish and Wildlife Service regarding our findings.

Because of the project's potential for adverse effects to bull trout, I requested formal consultation with the U.S. Fish and Wildlife Service. The USFWS concluded that the implementation of the project is not likely to jeopardize the survival and recovery of bull trout or result in the destruction or adverse modification of designated critical habitat. They further provided reasonable and prudent measures and terms and conditions to minimize the potential of incidental take, which I have incorporated into my decision (see Appendix B).

The U.S. Fish and Wildlife Service concurred with our determination that the project will not adversely affect Canada Lynx or grizzly bear. The USFWS determined that the Selected Action will maintain foraging habitat for Canada lynx and is consistent with all applicable standards and guidelines in the Northern Rockies Lynx Management Direction (2007). The project is not located within designated lynx critical habitat.

The USFWS also concurred with our finding that the Selected Action will not likely affect grizzly bears because it is not located within a recovery zone and grizzly bears are not known to currently occupy the area and are likely absent. However, use by transient bears could occur on occasion. Disturbance effects to grizzly bears from the proposed activities are unlikely but may occur if a grizzly bear is using the area during project implementation. Due to the location of the project and the distribution of grizzly bears, any disturbance effects would be insignificant.

The project will have no effect on any other listed species.

8.6 National Historic Preservation Act, American Indian Religious Freedom Act, and Native American Graves Protection and Repatriation Act

Cultural resource reviews have been completed on areas to be affected by ground-disturbing activities. The project is not expected to have any effects on cultural resources because all known sites eligible for the National Register of Historic Places and unevaluated sites will be avoided. Activity areas that were initially screened to have high or moderate probability for historic sites were surveyed and nothing was found. Recognizing the potential exists for unidentified sites to be encountered or disturbed during project activity, standard provisions for their protection will be included in all contracts used to implement this project. These provisions will allow the Forest Service to unilaterally modify or cancel a contract to protect cultural resources, regardless of when they are identified. This provision will be used if a site were discovered after project activities had begun. This project is in compliance with the Region 1 programmatic agreement with the State Historic Preservation Office and the Advisory Council on Historic Preservation.

The Forest Service consulted with the Nez Perce and Confederated Salish and Kootenai tribes during the analysis process. The intent of this consultation has been to remain informed about Tribal concerns regarding the American Indian Religious Freedom Act (AIRFA) and other tribal issues. In addition, the Flathead, Kootenai, and Upper Pend d'Orielles Indian Tribes reserved rights under the Hellgate Treaty of 1855. These rights include the "right of taking fish at all usual and accustomed places, in common with citizens of the Territory, and of erecting temporary buildings for curing**;** together with the privilege of

hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land." The Federal government has trust responsibilities to Tribes under a government-to-government relationship to insure that the Tribes reserved rights are protected. Consultation with the tribes throughout the project planning helps insure that these trust responsibilities are met. The Nez Perce and Confederated Salish and Kootenai tribes did not express any concerns about the project.

8.7 Migratory Bird Treaty Act

On January 10, 2001, President Clinton signed an Executive Order outlining responsibilities of federal agencies to protect migratory birds. Upon review of the information in the Wildlife report filed in the Project File, I find that the Selected Action complies with this Executive Order.

8.8 Roadless Area Conservation Rule

On January 21, 2001 the 2001 Roadless Area Conservation Rule (Roadless Rule) was established (36 CFR 294 Subpart B) to provide, within the context of multiple use management, lasting protection for inventoried roadless areas within the National Forest System. The 2001 Rule prohibited road construction, road reconstruction, and timber cutting, sale and removal in inventoried roadless areas with some exceptions.

36 CFR Subpart B 294.13: Timber may be cut, sold or removed in inventoried roadless areas where one or more of the following circumstances exist:

(1) the cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

(i) to improve threatened, endangered, proposed, or sensitive species habitat; or
(ii) to maintain or restore characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart;

(3) The cutting, sale, or removal of timber is needed and appropriate for personal or administrative use as provided for in 36 CFR part 223;

(4)Roadless characteristics have been substantially altered in a portion of an inventoried roadless area due to the construction of a classified road and subsequent timber harvest. Both the road construction and subsequent timber harvest must have occurred after the area was designated an inventoried roadless area and prior to January 12, 2001.

I carefully evaluated the actions in the Inventoried Roadless Areas and have determined that the Selected Action is fully consistent with the Roadless Rule as described below.

Authorized recreation activities, road treatments, non-commercial vegetation treatments, and prescribed burning within IRAs are consistent with the 2001 Roadless Area Conservation Rule. Tree cutting associated primarily with non-commercial vegetation treatments will

involve generally small diameter timber to improve sensitive species habitat (whitebark pine) (36 CFR Subpart B 294.13(b)(1)(i) and/or to maintain or restore characteristic of ecosystem composition and structure and reduce the risk of uncharacteristic wildfire effects (36 CFR Subpart B 294.13(b)(1)(ii)). Although not expected, there could be some cutting of generally small diameter trees associated with prescribed burning, road treatments, or recreation activities however, it will be incidental to the implementation of a management activity not otherwise prohibited (36 CFR Subpart B 294.13(b)(2)). Prescribed burning, road treatments (decommissioning, storage, and maintenance), and non-motorized trail construction are not prohibited in the Rule. No road construction or reconstruction will occur within IRAs.

In a few of the comments I received on the Draft EIS, there was some confusion about the definitions of road maintenance and road reconstruction. As defined in the Rule, road maintenance is the on-going upkeep of a road necessary to retain or restore the road to the approved road management objective, which is what will be completed in this project. The Roadless Rule allows maintenance of classified roads in IRAs (36 CFR 294.12(c)). Road reconstruction is defined as an activity that results in the improvement[3] or realignment[4] of an existing classified road, which will not occur as part of the Cedar-Thom project.

Authorized timber harvest on 1145 acres in the Sheep Mountain-State Line IRA is consistent with the 2001 Roadless Area Conservation Rule because tree cutting will involve generally small diameter timber to maintain or restore characteristic of ecosystem composition and structure and to reduce the risk of uncharacteristic wildfire effects (36 CFR Part B 294.13(b)(1)(ii)) and/or will occur where roadless characteristics have been substantially altered (36 CFR Subpart B 294.13(b)(4)). Activities will restore or maintain one or more of the roadless characteristics defined in 36 CFR Subpart B 294.11 (see FEIS, section 3.11).

All but 203 of 1145 acres of timber harvest in the IRA will occur within substantially altered portions of the IRA, which have been developed with classified roads and subsequent timber harvest after the designation as an IRA in 1979 and prior to the adoption of the Roadless Area Conservation Rule in January 2001. Timber harvest in these developed areas will occur between existing treatment units, many of which still appear as geometrically shaped openings on the hillside even though they have regenerated with young trees. Access to these treatment areas will be via existing classified roads (refer to the FEIS, Section 3.11, and Project File).

The Roadless Rule does not define “generally small diameter” timber. The preamble to the Rule states that the term “generally small diameter” is a relative term because of the great variation in stand characteristics between vegetation types and in different areas (66 FR 3257). Consequently, determinations of what constitutes “generally small diameter” are best made through project-specific analyses or land and resource management plan NEPA as guided by ecological considerations (66 FR 3257). Within the Cedar-Thom area, the size of the trees varies depending on the site-specific conditions. All proposed harvest treatments

[3] Road improvement is defined as an activity that results in an increase of an existing road’s traffic, service level, expansion of its capacity or a change in its original design function.
[4] Road realignment is defined as an activity that results in a new location of an existing road or portions of an existing road.

within IRA would result in an increase in average tree diameter within each treated area following implementation because the smaller trees on site would be removed (see FEIS page 3-286).

I reviewed the project with Chief Thomas Tidwell and Deputy Regional Forester Dave Schmid. They concurred that the actions within Inventoried Roadless Areas meet the 2001 Roadless Rule exceptions and that the Forest complied with the review requirements outlined in the May 31, 2012 letter from the Chief. They have delegated to me the authority to sign this decision.

9.0 Pre-decisional Administrative Review Process (Objection Process) and Implementation

The Cedar-Thom project includes activities that are designed to implement the goals and objectives of the Lolo Forest Plan that are not authorized under the Healthy Forests Restoration Act. This decision is subject to the objection process pursuant to 36 CFR 218, subparts A and B. Objections will only be accepted from those who have previously submitted specific written comments regarding the proposed project during scoping or other designated opportunity for public comment in accordance with §218.5(a). Issues raised in objections must be based on previously submitted timely, specific written comments regarding the proposed project unless based on new information arising after the designated comment opportunities.

Objections, including attachments, must be filed via mail, express delivery, or messenger service: (to Objection Reviewing Officer, USDA Forest Service, Northern Region, P.O. Box 7669, Missoula, MT 59807); FAX to (406) 329-3411; email to appeals-northern-regional-office@fs.fed.us; or by hand-delivery (Monday through Friday, 8:00 a.m. to 4:30 p.m., excluding holidays at USDA Forest Service, 200 East Broadway, Missoula, MT 59807).

Objections must be submitted within 45 calendar days following the publication of a legal notice in the *Missoulian* newspaper. The publication date in the newspaper of record is the exclusive means for calculating the time to file an objection. Those wishing to object should not rely upon dates or timeframe information provided by any other source. The regulations prohibit extending the time to file an objection.

The objection must contain the minimum content requirements specified in §218.8(d) and incorporation of documents by reference is permitted only as provided in §218.8(b). It is the objector's responsibility to ensure timely filing of a written objection with the reviewing officer pursuant to §218.9. All objections are available for public inspection during and after the objection process.

At a minimum an objection must include the following (36 CFR 218.8(d)):

1) The objector's name and address, with a telephone number, if available;
2) A signature or other verification of authorship upon request (a scanned signature for Email may be filed with the objection);

3) When multiple names are listed on an objection, identification of the lead objector (verification of the identity of the lead objector shall be provided upon request);
4) The name of the proposed project, the name and title of the Responsible Official, and the name(s) of the National Forest(s) and/or Ranger District(s) on which the proposed project will be implemented;
5) A description of those aspects of the proposed project addressed by the objection, including specific issues related to the proposed project; if applicable, how the objector believes the environmental analysis or draft decision specifically violates law, regulation, or policy; suggested remedies that would resolve the objection; supporting reasons for the reviewing officer to consider;
6) A statement that demonstrates connection between prior specific written comments on the particular proposed project or activity and the content of the objection, unless the objection concerns an issue that arose after the designated opportunities for comment.

If objections are filed, the responsible official may not issue a decision document approving the project until the reviewing officer has responded in writing to all objections. The project may be implemented immediately after the decision is signed.

If no objections are filed within the 45-day filing period, approval of the proposed project in a decision document may occur on, but not before, the fifth business day following the end of the objection filing period. Implementation can begin immediately after the decision is signed.

Further information about this decision can be obtained from District Ranger Tawnya Brummett at the Superior Ranger District Office (Address: 209 West Riverside Drive, P.O. Box 460, Superior, Montana 59872; Phone: (406) 822-3928) or Pat Partyka, Project Leader, at the Plains/Thompson Falls Ranger District Office (Address: 408 Clayton St, P.O. Box 429, Plains, Montana 59859; Phone: (406) 826-4314).

_____ _____

TIMOTHY GARCIA Date
Forest Supervisor

APPENDIX A

Project-Specific Resource Protection Measures and Monitoring Plan

Aquatics and Soil

1. Tractor skidding within Units 1, 4, 8, 13, and 124 will be conducted over frozen or snow covered ground OR summer harvest over slash mat to reduce the potential for soil compaction.

2. Swing-yard/constructed skid trails will be seeded and have slash (both coarse and fine sizes) placed on them to reduce the potential for soil erosion. Apply slash to a depth of 2-3 inches and in direct contact with the soil surface over 70 percent of the swing-yard or constructed skid trail surface OR to a depth and cover available from the slash stockpiled when building the trail. Where available, pull any displaced soil on the trail edge over the trail to inoculate the trail surface with soil biota.

3. Following use, helicopter landings will be rehabilitated:
   - During construction (if needed), the existing soil surface will be stockpiled at the back of the landing.
   - The soil surface will be hand or machined scarified to break up any hydrophobic layer. Depending on soil texture, access, and existing recovery levels, the landing could be sub-soiled or ripped. Turning of the soil will be avoided.
   - Previously excavated areas will be recontoured and the material re-graded back across the landing site to re-establish natural contours. The soil surface will be re-spread back over the scarified or recontoured landing.
   - As prescribed by the soil scientist, a prepared organic soil amendment will be added to the site.
   - The area will be seeded with grasses and forbs or the site planned with shrubs/trees.
   - Slash (both fine and coarse woody material) will be placed over the site to cover at least 50 percent of the landing to a depth of 2-3 inches.

4. In addition to the timber sale contract provisions, 5 to 20 tons per acre of slash will be placed on temporary road prisms and main skid trails upon their closure and rehabilitation. If no burning is planned within the unit, slash coverage at 15-20 tons per acre will be applied to a depth of 2-3 inches over 65-70 percent of the road prism in contact with the soil surface. If burning is planned in the unit, slash coverage should be closer to 5 tons per acres with discontinuous coverage.

5. Where possible in units prescribed for machine piling, slash will be piled and burned on areas that already have previously been disturbed, such as old log landings, skid trails, and abandoned roads associated with past activity. Slash will be left unburned or unpiled or both through one winter after cutting to allow for initial decomposition and nutrient leaching. Units adjacent to private land may be piled and burned as soon

as possible to reduce fire hazard. Hand piles would be no more than about 6 feet in diameter and 4 feet high.

6. Unless otherwise reviewed and approved by a soil scientist, cut material within non-commercial thinning units that overlap with previously harvested units will be left on site to provide future organic matter where it is currently lacking.

7. To reduce the potential for soil erosion from prescribed burning activities, mineral soil will not be exposed on more than 15 percent of the burned area following completion of the burn.

8. A no-harvest/no-equipment buffer will be applied around seeps and springs that are located within treatment areas. A 100-foot buffer will be applied on perennial features and a 50-foot would be applied on intermittent features.

9. An equipment exclusion buffer (50-feet measured from center line of the drainage or to the top of the inner gorge) will be applied on the ephemeral draws in Units 1, 65, 67, 201, and 500. Treatment activities will be allowed within the buffer, but equipment will be prohibited.

10. The temporary bridge needed to cross Thompson Creek will span the bankfull width and be up to BMP standards. The bridge will be designed to pass a 100-year flood event if it is in place during the runoff period (March thru June). Upon bridge removal, bank conditions and floodplain areas will be restored.

11. Before haul begins in the specific offering area, best management practices, including those described in the table below, will be applied.

Additional Road Maintenance Treatments Included in Alternative 5	Miles Treated
Cedar Creek Road (#320) M.P. 2.1 (end of pavement) -8.0 • Roadway Narrowing • Dust Abatement[1]	5.9
Cedar Creek Road (#320) M.P. 8.0-12.0 • Fill slope stabilization using gabions, plantings, or other appropriate measures	4.0
Cedar Creek Road (#320) M.P. 12.0-14.6 • Gravel Surfacing • Fill slope stabilization using gabions, plantings, or other appropriate measures	2.6
Lost Creek Road (#7865) M.P. 0.0 - 8.13 • Spot gravel surfacing where sediment delivery potential to stream is high • Dust abatement[1]	3.0
East Pierson Creek Road # 7836, from ridgeline between Thompson and Oregon drainages down to junction with Lost Creek Road (#7865) • Add drainage control structures and/ or shaping to prevent road surface from capturing runoff	2.0

Weeds

12. If gravel or other material is hauled for road surfacing, it will be from a site (pit) that has been previously treated for weeds and is currently weed free.

13. Pre-treat existing weed populations on drivable roads with herbicide prior to any ground disturbing activities that will occur on or near them.

Wildlife

14. Prior to the implementation of the prescribed burning in treatment area LS3, the known goshawk nest will be monitored to determine if the nest is occupied or if the birds have moved to an alternate nest site. If the nest is unoccupied, then prescribed burning could proceed. If the nest is occupied, then the nest stand will be excluded from the prescribed burn.

15. Activities will not occur within Units 905, LS6, LS13, and LS14 during the period from May 15 to July 15 to reduce potential disturbance to flammulated owls during mating, nesting, and/or fledging.

Botany

16. Existing whitebark pine trees within Units 66, 67, 155, and 156 will be retained during logging operations. Blister rust-resistant whitebark pine seedlings will be planted throughout the units.

17. Whitebark pine trees within Unit 87 will be retained during logging operations.

18. Blister rust-resistant whitebark pine seedlings will be planted along ridge in Units 104, 106, and 108.

19. Within Units 950 and MS-3, whitebark pine "Plus" trees will be protected from prescribed fire.

20. Within Unit MS-3, trees will be thinned around selected whitebark pine trees and the fuels pulled back away from the retained whitebark pine trees before burning. After burning, monitoring will be conducted to assess whether planting whitebark pine is desirable.

Monitoring Plan

Aquatics – from the USFWS Biological Opinion for bull trout

1. The Forest will ensure the implementation of all elements in the following monitoring strategy:
    - Conduct implementation monitoring on road improvement activities for Cedar Creek (#320), Lost Creek (#7865), and East Pierson Creek (#7836) roads prior to any haul activities occurring.
    - Identify and photo document as necessary those road sections that will be narrowed. This includes an estimate of width before and after narrowing.

Representative photo documentation should occur annually during the project to ensure narrowing is maintained.

- One day a year, joint field review by the Forest and U.S. Fish and Wildlife Service, for 10 years within offering area (assuming Cedar Creek and Oregon Gulch are separate offerings). These field reviews of the Cedar Creek road #320 (m.p. 2 to 14.6), all of the Lost Creek road #7865 to the gate, and East Pierson road #7836 (to divide with Thompson Creek) are to evaluate the effectiveness of applied road BMPs. At a minimum, the annual review will investigate the following five items:
  - Are drainage culverts effective?
  - Are drivable dips in place?
  - Are narrowed sections still the correct width?
  - Is there evidence of road surface erosion (rilling, edge cracking)?
  - Are stabilized road/stream sections on Cedar Creek functioning?
- Monitoring must be reasonably affordable.
- The U.S. Fish and Wildlife Service should be notified in advance of the operating season and provided an opportunity to be a part of implementation visits.
- Annually complete pebble counts in spawning reaches of Oregon Gulch

2. During the implementation of harvest treatments, the Forest will monitor RHCA buffers to ensure they are not compromised by management activities or climatic events that influence buffer efficacy.

3. The Forest will annually monitor the condition and use of those principle forest roads that received BMPs and road treatments in the action area to ensure that sediment or debris delivery is minimized to the extent possible. These monitoring efforts will include periodic field review of haul routes and associated traffic volumes.

Aquatics - Other

Implementation and effectiveness monitoring will be completed for the culvert removal, culvert replacement, and stream rehabilitation activities to ensure streams are functioning appropriately and no active erosion is occurring at these sites. Monitoring will occur after the first runoff season and then periodically after high runoff events during project implementation.

Soils

The Lolo National Forest Soil Monitoring Program objective is to evaluate project design and standard soil operating procedures to ensure they were implemented and that following implementation harvest units comply with the Lolo Forest Plan and Regional soil quality standards. As part of the Forest Soil Monitoring Program, Cedar-Thom treatment units 1, 4, 8, 13, 22, 60, 66, 67, 103, 106, 112, 156, and 184 will be monitored after harvest activities are completed.

The soil scientist works closely with the layout and design crews as well as the Timber Sale Administrator. When concerns or questions arise, the site is visited and decisions are

documented. If any units are suspected of exceeding Region 1 soil quality standards following activities, they will be reviewed and rehabilitation measures applied.

Fire, Fuels and Air Quality

Prescribed burning will follow approved Prescribed Fire Plans, which will define the acceptable range of measurable criteria for environmental conditions and fire behavior. Prior to ignition, fuel moistures and weather conditions will be monitored to ensure they are within acceptable limits. During ignition, weather conditions, smoke dispersion, and fire behavior parameters will be monitored to ensure they are within acceptable limits. Post-burn monitoring will be completed to determine if objectives, as outlined in the Prescribed Fire Plan, are met.

Vegetation

A certified Silviculturist will develop or approve silvicultural prescriptions for each vegetation treatment unit and will assure compliance with these prescriptions during sale preparation, contract administration, and post-harvest activities. The silviculturist will be involved in and/or consulted during treatment area boundary layout, tree designation, and contract preparation.

Activities that involve the removal of wood products will be monitored by a qualified Timber Sale Contract Administration team, including a Contracting Officer, Forest Service Representative, Timber Sale Administrator, and/or Harvest Inspector. This team will inspect provisions of the timber sale contract. Specifically for forest vegetation protection, they will monitor snag retention, protection of residual trees, utilization of material meeting merchantability specifications, and retention of down coarse woody material.

Regeneration success in harvested areas will be monitored following standard procedures outlined in Forest Service Handbooks. As necessary, additional treatments will be implemented until stands met certification standards identified in silvicultural prescriptions.

Research scientists at the Rocky Mountain Research Station will monitor several of the whitebark pine treatments as part of an on-going study to determine the effectiveness of restoration treatments on this species.

Transportation

Areas disturbed during road reconstruction, closures, and installation of BMPs will be monitored for one year to determine needs for additional seeding and soil stabilization measures.

Routine monitoring will be conducted to determine the effectiveness of road closures.

APPENDIX B

Terms and Conditions of the Biological Opinion for Bull Trout (USFWS April 28, 2014)

Reasonable and Prudent Measures

The USFWS believes the following reasonable and prudent measures are necessary and appropriate to minimize the potential for incidental take of bull trout that is anticipated to result from implementation of the Cedar-Thom project.

1. Identify and implement means to reduce the potential for incidental take of bull trout resulting from sedimentation due to increased road use and road management actions in the action area.

2. Monitor timber harvest, road use, and road management actions associated with the Cedar Creek Integrated Restoration Project to ensure that actions and projects comply with the biological assessment and biological opinion and that the specified level of incidental take associated with these elements of the project is not exceeded.

3. Implement reporting requirements as outlined in the terms and conditions below.

Terms and Conditions

The following terms and conditions implement the reasonable and prudent measures described above. To fulfill reasonable and prudent measure #1, the following terms and conditions shall be implemented:

1. The Forest will ensure that all road improvements identified under Additional Mitigation Added to Project Activities prior to the first log haul season as described in the Proposed Action section of the Biological Opinion and shown in the table below will be implemented.

Road Treatments	Miles Treated	Approximate Year of Work Once Implementation Begins[3]
Cedar Creek Road (#320) M.P. 2.1 (end of pavement) -8.0 • Roadway Narrowing • Dust Abatement[1] • BMPs: erosion control, drainage[2], and blading and shaping	5.9	Prior to first log haul season
Cedar Creek Road (#320) M.P. 8.0-12.0 • BMPs: erosion control, drainage[2], and blading and shaping • Fill slope Stabilization using gabions, plantings, or other appropriate measures	4.0	Prior to first log haul season
Cedar Creek Road (#320) M.P. 12.0-14.6 • Gravel Surfacing • BMPs: erosion control, drainage, and blading[2] and shaping	2.6	Prior to first log haul season

Road Treatments	Miles Treated	Approximate Year of Work Once Implementation Begins[3]
• Fill slope Stabilization using gabions, plantings, or other appropriate measures		
East Pierson Creek Road #7836, from ridgeline between Thompson and Oregon drainages down to junction with Lost Creek Road (#7865) • Add drainage control structures and/ or shaping to prevent road surface from capturing runoff	2.0	Prior to first log haul season
Lost Creek Road (#7865) M.P. 0.0 - 8.13 • Spot gravel surfacing where sediment delivery potential to stream is high • Dust Abatement[1] • BMPs: erosion control, drainage[2], and blading and shaping	3.0	Prior to first log haul season

[1]Dust Abatement will be applied every year heavy hauling is anticipated (estimate 3 applications).
[2]Drainage includes cleaning of existing structures and the installation of structures at frequent spacing to get water off road. All road drainage will be properly filtered after being discharged from the road.
[3]All work listed in this column will occur before haul begins in the specific offering area.

2. The Forest will ensure the replacement or removal of culverts identified in the project description will provide for passage of all life stages of bull trout and provide for accommodation of the 100-year flood discharge without backwater conditions and/or erosion of associated streambanks or road fill.

3. During all road management actions, the Forest shall implement soil and water Best Management Practices (BMPs) and the specific minimization measures identified for each Activity Type as developed in the Biological Assessment of Road Related Actions on Western Montana Federal Lands that are Likely to Adversely Affect Bull Trout (USDA 2008), as appropriate. BMPs will be installed prior to the first log haul season, preferably the season before log haul occurs.

4. Prior to harvest treatments, along perennial, intermittent and ephemeral streams within the action area, the Forest shall verify that RHCAs of an appropriate width have been identified on the ground in a visible manner and that landslide prone areas and other sensitive areas have been incorporated into RHCAs. During and prior to the implementation period of the Cedar-Thom project, should new stream channels develop or existing channels be functionally reclassified, the Forest shall re-delineate RHCAs of the appropriate width prior to further timber harvest.

5. The Forest shall implement, maintain, and monitor all BMPs for effectiveness to ensure minimizing sediment delivery from all project related roads for the 10-year project duration.

6. Upon discovering ineffective BMPs and/or road treatments, the Forest will implement corrective actions within 10 working days (14 calendar days), or as agreed to by the Service.

To fulfill reasonable and prudent measure #2, the following terms and conditions shall be implemented:

7. The Forest shall ensure the implementation of all elements in the monitoring strategy of the Cedar-Thom Project as described in the Cedar-Thom Integrated Restoration Project Biological Assessment Synopsis (dated January 21, 2014). The Monitoring Plan as displayed in Biological Opinion (page 13) includes:

    - Conduct implementation monitoring on road improvement activities for Cedar Creek (#320), Lost Creek (#7865), and East Pierson Creek (#7836) roads prior to any haul activities occurring.
    - Identify and photo document as necessary those road sections that will be narrowed. This includes an estimate of width before and after narrowing. Representative photo documentation should occur annually during the project to ensure narrowing is maintained.
    - One day a year, joint field review by the Forest and Service, for 10 years within offering area (assuming Cedar Creek and Oregon Gulch are separate offerings). These field reviews of the Cedar Creek road #320 (m.p. 2 to 14.6), all of the Lost Creek road #7865 to the gate, and East Pierson road #7836 (to divide with Thompson Creek) are to evaluate the effectiveness of applied road BMPs. At a minimum, the annual review will investigate the following five items:
        - Are drainage culverts effective?
        - Are drivable dips in place?
        - Are narrowed sections still the correct width?
        - Is there evidence of road surface erosion (rilling, edge cracking)?
        - Are stabilized road/stream sections on Cedar Creek functioning?
    - Monitoring must be reasonably affordable.
    - The U.S. Fish and Wildlife Service should be notified in advance of the operating season and provided an opportunity to be a part of implementation visits.
    - Annually complete pebble counts in spawning reaches of Oregon Gulch

8. During the implementation of harvest treatments, the Forest shall monitor RHCA buffers to ensure they are not compromised by management activities or climatic events that influence buffer efficacy.

9. The Forest shall annually monitor the condition and use of those principle forest roads that received BMPs and road treatments in the action area to ensure that sediment or debris delivery is minimized to the extent possible. These monitoring efforts shall include periodic field review of haul routes and associated traffic volumes.

To fulfill reasonable and prudent measure #3, the following terms and conditions shall be implemented:

10. Upon locating dead, injured or sick bull trout, or upon observing destruction of redds, notification must be made within 24 hours to the Montana Field Office at 406-449-5225. Record information relative to the date, time, and location of dead or injured

bull trout when found, and possible cause of injury or death of each fish and provide this information to the Service.

11. The Forest shall provide the results of the annual monitoring conducted as described in Terms and Conditions above, by May 1 each year, for activities occurring in the preceding calendar year, or by an alternate date as agreed by the Service. These annual monitoring reports will follow the same format used in the Biological Opinion on the Effects to Bull Trout and Bull Trout Critical Habitat from Road Management Activities on Nation Forest System and Bureau of Land Management Lands in Western Montana, Appendix H. Roads Programmatic Field Audit Form to ensure that drainage features are functioning as planned (U.S. Fish and Wildlife Service 2007). The annual monitoring report shall include a narrative on compliance of proposed actions identified in the revised Biological Assessment (July 2012), 2014 Synopsis, and the Biological Opinion and shall expressly describe whether the level of incidental take associated with these elements of the proposed project has been exceeded. The format of the report shall be approved by the Service prior to the initiation of harvest.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, the terms and conditions 1 through 11 are not adhered to, the level of incidental take anticipated in the Biological Opinion may be exceeded. Such incidental take may represent new information requiring re-initiation of consultation and review of the reasonable and prudent measures provided. The Service retains the discretion to determine whether non-compliance with terms and conditions 1 through 11 results in incidental take exceeding that considered here, and whether consultation should be re-initiated. The Forest must immediately provide an explanation of the causes of any non-compliance and review with the Service the need for possible modification of the reasonable and prudent measures.

APPENDIX C

DETAILS and MAP OF THE SELECTED ACTION

Summary of Vegetation Treatments

Treatment Type	Selected Action (approximate acres)
Timber Harvest[1]	4398
Non-commercial Mechanical Treatments[2]	2141
Prescribed Burn – low severity	3785*
Prescribed Burn – mixed severity[3]	6948*
TOTAL	17,272
TOTAL FOOTPRINT (discounts overlapping treatments)	16,215

[1]Timber harvest will involve the removal of undesired trees of a size considered merchantable for lumber and paper products to enhance healthy trees of desired species and to develop stands that are more resilient to environmental disturbances such as wildfire and insect and disease outbreaks. In areas where there is existing and/or ongoing mortality due to insects, the removal of dead and dying trees may result in forest openings. Following harvest, these areas will be underburned or piled and burned to facilitate planting of desirable tree species or to encourage natural regeneration.

[2] Non-commercial mechanical treatments will include activities such as thinning sapling-sized trees to feature healthy trees of desired species; removing competing vegetation from around trees of desired species; and pruning the lower branches of whitebark pine trees. Site-specific treatments will depend on existing stand conditions and the forest type the treatment is intended to enhance.

[3] Not all acres displayed in this table will be ignited. These acres represent the total area where forest stands are experiencing various stages of mortality and prescribed fire may be utilized to reduce existing fuels.

* Some of the prescribed burning acres overlap mechanical vegetation treatments.

Selected Action Treatment Areas (see Selected Action map)

Unit	Approximate Acres	Forest Type	Activity[1]	Equipment[2]
1	41	PP Mix	Improvement Cut	Tractor
4	82	PP Mix	Improvement Cut	Tractor
5	46	PP Mix	Improvement Cut	Skyline
6	67	PP Mix	Improvement Cut	Skyline
8	83	PP Mix	Improvement Cut	Tractor
13	28	PP Mix	Improvement Cut	Tractor
14	78	PP Mix	Improvement Cut	Helicopter
15	57	PP Mix	Improvement Cut	Helicopter
17	48	PP Mix	Improvement Cut	Helicopter
19	32	PP Mix	Improvement Cut	Skyline
21	56	PP Mix	Improvement Cut	Skyline
22	81	WL Mix	Commercial Thin	Tractor
30	19	PP Mix	Regeneration Cut	Skyline
31	13	WL Mix	Regeneration Cut	Skyline

Unit	Approximate Acres	Forest Type	Activity[1]	Equipment[2]
32	19	PP Mix	Commercial Thin	Excaliner
33	30	PP Mix	Commercial Thin	Skyline
34	73	PP Mix	Improvement Cut	Skyline
35	54	WL Mix	Commercial Thin	Helicopter
51	24	PP Mix	Improvement Cut	Helicopter
52	43	PP Mix	Improvement Cut	Helicopter
53	177	PP Mix	Improvement Cut	Helicopter
54	245	WL Mix	Commercial Thin	Helicopter
55	139	WL Mix	Commercial Thin	Helicopter
56	123	WL Mix	Commercial Thin	Helicopter
58	96	WL Mix	Commercial Thin	Skyline
59	17	WL Mix	Regeneration Cut	Skyline
60	21	WL Mix	Commercial Thin	Tractor
63	35	WL Mix	Improvement Cut	Skyline
65	23	WL Mix	Regeneration Cut	Tractor
66	27	WBP Mix	Regeneration Cut	Skyline
67	68	WBP Mix	Regeneration Cut	Tractor
80	17	WL Mix	Commercial Thin	Tractor
81	101	WL Mix	Commercial Thin	Skyline
82	29	WL Mix	Commercial Thin	Skyline
83	21	WL Mix	Commercial Thin	Skyline
84	15	WL Mix	Commercial Thin	Skyline
85	46	WL Mix	Commercial Thin	Skyline
86	21	WL Mix	Regeneration Cut	Skyline
87	38	WL Mix	Commercial Thin	Skyline
89	2	WL Mix	Improvement Cut	Tractor
91	51	WL Mix	Commercial Thin	Skyline
97	33	WL Mix	Regeneration Cut	Tractor
98	68	WL Mix	Commercial Thin	Skyline
101	46	WL Mix	Commercial Thin	Skyline
102	55	PP Mix	Commercial Thin	Skyline
103	7	WL Mix	Regeneration Cut	Tractor
104	35	WL Mix	Regeneration Cut	Tractor
105	19	WL Mix	Regeneration Cut	Skyline
106	45	WL Mix	Regeneration Cut	Tractor
107	34	WL Mix	Regeneration Cut	Skyline
108	40	WL Mix	Regeneration Cut	Tractor
109	28	WL Mix	Regeneration Cut	Skyline
110	33	WL Mix	Regeneration Cut	Skyline
111	67	WL Mix	Commercial Thin	Skyline

Unit	Approximate Acres	Forest Type	Activity[1]	Equipment[2]
112	17	WL Mix	Commercial Thin	Tractor
113	9	WL Mix	Regeneration Cut	Skyline
115	35	WL Mix	Regeneration Cut	Tractor
116	39	WL Mix	Commercial Thin	Skyline
117	22	WL Mix	Regeneration Cut	Skyline
119	43	WL Mix	Commercial Thin	Tractor
120	102	WL Mix	Commercial Thin	Skyline
124	15	WL Mix	Commercial Thin	Tractor
127	29	WL Mix	Commercial Thin	Excaliner
128	138	WL Mix	Improvement Cut	Excaliner
151	2	WL Mix	Regeneration Cut	Tractor
152	69	WL Mix	Regeneration Cut	Skyline
155	8	WBP Mix	Regeneration Cut	Tractor
156	4	WBP Mix	Regeneration Cut	Tractor
158	34	WL Mix	Improvement Cut	Skyline
159	6	WL Mix	Commercial Thin	Tractor
159	19	WL Mix	Commercial Thin	Tractor
160	12	PP Mix	Regeneration Cut	Skyline
161	13	PP Mix	Improvement Cut	Skyline
161	19	PP Mix	Improvement Cut	Skyline
162	40	WL Mix	Regeneration Cut	Skyline
163	35	WL Mix	Regeneration Cut	Skyline
164	30	PP Mix	Regeneration Cut	Skyline
183	4	WL Mix	Improvement Cut	Tractor
184	3	WL Mix	Improvement Cut	Tractor
187	40	WL Mix	Commercial Thin	Skyline
201	19	PP Mix	Improvement Cut	Tractor
207	37	WL Mix	Regeneration Cut	Skyline
210	33	WL Mix	Commercial Thin	Skyline
212	11	WL Mix	Regeneration Cut	Skyline
220	42	WL Mix	Commercial Thin	Skyline
251	26	WL Mix	Commercial Thin	Tractor
257	144	WL Mix	Commercial Thin	Skyline
261	18	WL Mix	Commercial Thin	Skyline
362	15	WL Mix	Regeneration Cut	Tractor
401	27	PP Mix	Regeneration Cut	Skyline
403	12	WL Mix	Commercial Thin	Helicopter
405	7	PP Mix	Improvement Cut	Tractor
424	28	WL Mix	Commercial Thin	Helicopter
428	22	WL Mix	Improvement Cut	Tractor

Unit	Approximate Acres	Forest Type	Activity[1]	Equipment[2]
435	22	WL Mix	Commercial Thin	Helicopter
452	14	WL Mix	Regeneration Cut	Tractor
453	10	WL Mix	Regeneration Cut	Tractor
458	3	WL Mix	Improvement Cut	Tractor
459	14	WL Mix	Commercial Thin	Skyline
461	2	PP Mix	Improvement Cut	Tractor
462	13	WL Mix	Commercial Thin	Tractor
464	38	PP Mix	Commercial Thin	Skyline
486	30	WL Mix	Improvement Cut	Skyline
490	51	WL Mix	Regeneration Cut	Skyline
491	82	WL Mix	Commercial Thin	Skyline
500	8	WL Mix	Commercial Thin	Tractor
501	17	PP Mix	Improvement Cut	Skyline
502	6	PP Mix	Commercial Thin	Skyline
559	17	WL Mix	Regeneration Cut	Tractor
659	2	WL Mix	Regeneration Cut	Tractor
690	34	WL Mix	Regeneration Cut	Tractor
790	6	WL Mix	Regeneration Cut	Tractor
900	60	PP Mix	Pre-commercial Thin	N/A
901	117	PP Mix	Pre-commercial Thin	N/A
902	42	PP Mix	Pre-commercial Thin	N/A
903	58	PP Mix	Pre-commercial Thin	N/A
904	43	PP Mix	Pre-commercial Thin	N/A
905	65	PP Mix	Pre-commercial Thin	N/A
906	125	PP Mix	Pre-commercial Thin	N/A
907	133	PP Mix	Pre-commercial Thin	N/A
912	29	WL Mix	Pre-commercial Thin	N/A
913	12	WL Mix	Pre-commercial Thin	N/A
914	8	WL Mix	Pre-commercial Thin	N/A
915	16	WL Mix	Pre-commercial Thin	N/A
916	15	WL Mix	Pre-commercial Thin	N/A
916	44	WL Mix	Pre-commercial Thin	N/A
917	296	WL Mix	Pre-commercial Thin	N/A
920	50	WBP Mix	Pre-commercial Thin	N/A
921	151	WL Mix	Pre-commercial Thin	N/A
922	12	WL Mix	Pre-commercial Thin	N/A
923	54	WL Mix	Pre-commercial Thin	N/A
924	170	WL Mix	Pre-commercial Thin	N/A
925	15	WL Mix	Pre-commercial Thin	N/A
926	23	WL Mix	Pre-commercial Thin	N/A

Unit	Approximate Acres	Forest Type	Activity[1]	Equipment[2]
927	23	WL Mix	Pre-commercial Thin	N/A
931	21	PP Mix	Pre-commercial Thin	N/A
932	17	PP Mix	Pre-commercial Thin	N/A
950	89	WBP Mix	Non-commercial Thin	N/A
951	11	WBP Mix	Non-commercial Thin	N/A
952	3	WBP Mix	Non-commercial Thin	N/A
953	4	WBP Mix	Non-commercial Thin	N/A
954	25	WBP Mix	Non-commercial Thin	N/A
955	20	WBP Mix	Non-commercial Thin	N/A
960	41	WBP Mix	Non-commercial Thin	N/A
1037	31	WBP Mix	Non-commercial Thin	N/A
1066	32	WBP Mix	Non-commercial Thin	N/A
LS1	118	PP Mix	Prescribed burn - low severity	N/A
LS10	266	PP Mix	Prescribed burn - low severity	N/A
LS11	15	PP Mix	Prescribed burn - low severity	N/A
LS12	21	PP Mix	Prescribed burn - low severity	N/A
LS13	464	PP Mix	Prescribed burn - low severity	N/A
LS14	241	PP Mix	Prescribed burn - low severity	N/A
LS15	27	PP Mix	Prescribed burn - low severity	N/A
LS16	54	PP Mix	Prescribed burn - low severity	N/A
LS17	161	PP Mix	Prescribed burn - low severity	N/A
LS2	371	PP Mix	Prescribed burn - low severity	N/A
LS3	799	PP Mix	Prescribed burn - low severity	N/A
LS4	156	PP Mix	Prescribed burn - low severity	N/A
LS5	198	PP Mix	Prescribed burn - low severity	N/A
LS6	270	PP Mix	Prescribed burn - low severity	N/A
LS7	185	PP Mix	Prescribed burn - low severity	N/A
LS8	181	PP Mix	Prescribed burn - low severity	N/A
LS9	258	PP Mix	Prescribed burn - low severity	N/A
MS1	497	WL Mix	Prescribed burn - mixed severity	N/A
MS2	2832	WL Mix	Prescribed burn - mixed severity	N/A
MS3	720	WL Mix	Prescribed burn - mixed severity	N/A
MS4	1220	WL Mix	Prescribed burn - mixed severity	N/A
MS5	196	WL Mix	Prescribed burn - mixed severity	N/A
MS6	390	WL Mix	Prescribed burn - mixed severity	N/A
MS7	173	WL Mix	Prescribed burn - mixed severity	N/A
MS8	838	WL Mix	Prescribed burn - mixed severity	N/A
MS9	82	WL Mix	Prescribed burn - mixed severity	N/A
SP1	31		Slash and hand pile	N/A
SP3	6		Slash and hand pile	N/A

Unit	Approximate Acres	Forest Type	Activity[1]	Equipment[2]
SP8	4		Slash and handpile	N/A
SP2	22		Slash and hand pile	N/A
SP4	13		Slash and hand pile	N/A
SP5	11		Slash and hand pile	N/A
SP6	18		Slash and hand pile	N/A
SP7	24		Slash and hand pile	N/A
SP9	16		Slash and hand pile	N/A
Property Lines	141		Slash and hand pile	N/A

[1]Activity may be modified depending on the site-specific conditions within the unit at the time of implementation.
[2]Equipment reflects the primary yarding system. Units may contain incidental areas that would require another type of equipment.

Road Treatments

Summary of Road Treatments

	Selected Action (miles)
New Construction	
Temporary	2.4
Long-term Specified - gate	4.1
Long-term Specified – store	0.3
Subtotal	6.8
Road Treatments	
Storage[1]	19
Decommission[2]	118
Maintenance (BMPs) for haul	86
Travel Management Changes	
Change from open to closed yearlong	5.4
Subtotal	5.4

[1]Storage miles do not include new road construction labeled "Long-term Specified-store".
[2]Decommission miles do not include temporary roads.

Road Construction

Temporary Road Construction:
Roads that are built for temporary use will be constructed to a minimal standard to provide access for harvesting equipment and log trucks. As part of the initial road clearing, slash removed from the right-of-way will be placed in a windrow along the roadway so that it could be replaced over the recontoured surface following use. These roads will be decommissioned following use.

Long-term Specified:
These roads will be constructed to access treatment areas for this project and were identified as needed to provide long-term access needs for future land management. Construction standards will provide access for harvesting equipment, and Best Management Practices will be applied in the location, design, and construction. All roads will be added to the road

system. All new long-term specified roads except one (about 0.3 miles) will be closed yearlong to public motorized with a gate, but will be available for administrative use. The exception is new road 37168ext which will be placed into storage following completion of the project.

Road Maintenance:

Road Maintenance (BMPs):

Road maintenance will be applied to roads needed for long-term access that have deteriorated and do not meet Best Management Practice standards. Forest Service Manual 7700 defines road maintenance as "the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective". As a result, the intent of road maintenance treatments is to bring the road into conformance with its assigned maintenance level and function, not to improve the road beyond its existing function.

Road Closures

Closure Level 3-S (Storage):

Closure Level 3-S means that the road prism will be left intact, but in a stabilized condition for future use. Treatment activities will include removal of stream crossing structures and restoring stream crossings to natural contours, water bar installation, grass-seeding and entrance closure. Ripping (de-compaction) will occur where needed – primarily where there is little to no existing vegetation on the road surface.

Decommissioning:

These roads have been identified as "not needed" for long-term access. Alternate routes and methods will be used to access these areas in the future. The route status will be changed from "Existing" to "Decommissioned" in the Forest Roads Atlas and INFRA database.

- *Closure Level 3D*: Closure activities would include road surface ripping, woody debris placement on the road surface, stream crossing removal and restoring stream crossings to natural contours, water bar installation, road prism seeding, and entrance closure.
- *Closure Level 3D**: The intent of this closure is to decommission the road by treating isolated features without re-disturbing road surfaces that are already stable from natural processes. Stream crossing structures will be removed. Water bars or other drainage features will be installed in select locations where needed. The road entrance would be recontoured where existing vegetation does not already prevent motor vehicle access. In order to maintain existing vegetation, the road surface itself would not be treated.
- *Closure Level 4:* Treatments would be similar to Closure Level 3D, but will include recontouring of select segments of roads.
- *Closure Level 5:* Closure activities will include full prism recontouring, structure removal and reshaping of stream crossings to natural contours, placing woody debris on the disturbed area, seeding the recontoured road prism. .
- *Closure Level 3DN:* Because these roads are already revegetated with brush and trees, no physical activities would occur on the ground. The intent of this closure is to administratively decommission unneeded roads without disturbing road surfaces that are already stable from natural processes.

Road Closures in the Selected Action (see Selected Action map)

Road No.	BMP	EMP	Length	Management Action[1]
16124	0.00	2.76	2.76	Open to closed yearlong (Map Code A)
16561	0.00	0.78	0.78	Open to closed yearlong (Map Code A)
16917	0.00	2.52	2.52	
16918	0.00	0.45	0.45	Decommission, Closure Level 3D.
16919	0.00	0.23	0.23	Decommission, Closure Level 3D.
16920	0.62	1.45	0.83	Decommission, Closure Level 4.
16938	2.45	3.30	0.85	Store, Closure Level 3S.
16939	0.00	1.20	1.20	
16940	0.80	1.60	0.80	Store, Closure Level 3S.
16940	0.60	0.80	0.20	
16941	0.00	1.80	1.80	
18579	0.00	2.27	2.27	
18584	0.00	0.36	0.36	Store, Closure Level 3S.
18586	0.00	0.47	0.47	Store, Closure Level 3S.
18586	0.47	1.09	0.62	Store, Closure Level 3S.
18586	1.09	1.20	0.11	Store, Closure Level 3S.
18587	0.00	1.13	1.13	Decommission, Closure Level 4.
18587	1.13	2.83	1.70	Store, Closure Level 3S.
18588	0.00	3.98	3.98	
18605	0.98	1.23	0.25	
18605	0.00	0.45	0.45	
18605	0.45	0.98	0.53	
18605	1.23	1.33	0.10	
18610	0.00	0.23	0.23	Decommission, Closure Level 4.
18612	0.00	1.14	1.14	Store, Closure Level 3S.
18612	1.14	1.41	0.27	Store, Closure Level 3S.
18613	0.00	1.00	1.00	Decommission, Closure Level 3D.
18644	0.00	1.10	1.10	
18645	0.00	2.20	2.20	Store, Closure Level 3S.
18647	0.00	0.26	0.26	Decommission, Closure Level 3D*.
18671	0.00	0.41	0.41	
18688	0.00	0.49	0.49	
18689	0.00	0.50	0.50	
18704	0.00	1.57	1.57	
18705	0.00	0.64	0.64	
18705-A	0.00	0.34	0.34	Decommission, Closure Level 4.
19268	0.00	0.18	0.18	
19310	0.00	1.46	1.46	
19311	0.00	0.26	0.26	Convert to Private

Road No.	BMP	EMP	Length	Management Action[1]
304	0.00	3.42	3.42	
320	0.00	21.95	2.24	
37116	0.00	1.03	1.03	Decommission, Closure Level 3D.
37160	0.00	2.59	2.59	Decommission, Closure Level 3DN.
37161	0.00	1.88	1.88	Add to system.
37162	0.00	1.13	1.13	Decommission, Closure Level 3DN.
37163	0.00	1.14	1.14	Decommission, Closure Level 3DN.
37164	0.00	1.06	1.06	Decommission, Closure Level 3D*.
37164	1.06	1.33	0.27	
37165	0.00	0.59	0.59	Decommission, Closure Level 3D*.
37166	0.00	0.60	0.60	Decommission, Closure Level 3D*.
37167	0.00	1.01	1.01	Decommission, Closure Level 3D*.
37168	0.00	1.29	1.29	Decommission, Closure Level 3D*.
37168	1.29	1.65	0.36	Add to system. Store, Closure Level 3S.
37173	0.00	0.38	0.38	
37174	0.00	0.32	0.32	Decommission, Closure Level 3D*.
37174	0.96	1.20	0.24	Decommission, Closure Level 3D*.
37174	0.32	0.96	0.64	Decommission, Closure Level 3DN.
37175	0.00	0.54	0.54	Store, Closure Level 3S.
37176	0.00	0.60	0.60	Decommission, Closure Level 3D.
37214	0.00	0.41	0.41	Decommission, Closure Level 3DN.
37215	0.00	0.57	0.57	Add to system. Store, Closure Level 3S.
37216	0.00	1.09	0.08	Add to system. Store, Closure Level 3S.
37217	0.00	0.38	0.38	Decommission, Closure Level 3D.
37218	0.00	0.36	0.36	Decommission, Closure Level 3D.
37219	0.00	0.73	0.73	Decommission, Closure Level 4.
37222	0.00	0.28	0.28	Add to system. Closure Level 2
37223	0.00	0.64	0.64	Decommission, Closure Level 3D*.
37223	0.64	1.49	1.49	Retain for Private Access.
37224	0.20	0.86	0.66	Decommission, Closure Level 3D*.
37224	0.00	0.20	0.20	Retain for Private Access.
37225	0.00	0.54	0.54	Retain for Private Access.
37229	0.00	0.68	0.68	Decommission, Closure Level 3DN.
37230	0.00	0.61	0.61	Decommission, Closure Level 3D*.
37231	0.00	1.77	1.77	Decommission, Closure Level 3DN.
37232	0.00	0.89	0.89	Decommission, Closure Level 3D*.
37233	0.00	0.47	0.47	Decommission, Closure Level 3DN.
37234	0.00	0.73	0.73	Decommission, Closure Level 3DN.
37235	0.00	0.23	0.23	Decommission, Closure Level 3D.
37236	0.00	0.56	0.56	Decommission, Closure Level 3DN.

Road No.	BMP	EMP	Length	Management Action[1]
37237	0.00	0.62	0.62	Decommission, Closure Level 3D.
37243	0.00	0.41	0.41	Decommission, Closure Level 3D.
37250	0.35	0.51	0.16	Decommission, Closure Level 3D.
37250	0.00	0.35	0.35	Retain for Private Access.
37272	0.11	0.31	0.19	Decommission, Closure Level 3D.
37272	0.00	0.11	0.11	
37302	0.00	2.19	2.19	Decommission, Closure Level 3DN.
37316	0.00	0.22	0.22	Decommission, Closure Level 3D.
37335	0.00	0.73	0.73	Retain for Private Access.
37339	0.42	1.61	1.18	Decommission, Closure Level 3D.
37339	0.00	0.42	0.42	Retain for Private Access.
37345	0.00	0.32	0.32	Decommission, Closure Level 3D.
37346	0.00	0.87	0.87	Decommission, Closure Level 3DN.
37347	0.00	0.88	0.88	Decommission, Closure Level 3DN.
37348	0.00	0.80	0.80	Decommission, Closure Level 3D*.
37349	0.28	0.38	0.08	Decommission, Closure Level 3D*.
37349	0.00	0.28	0.28	Decommission, Closure Level 3DN.
37358	0.30	1.59	1.30	Retain for Private Access. (MP 0 - MP 1.04)
37358	0.00	0.30	0.30	Retain for Private Access. (MP 0 - MP 1.04)
37498	0.00	0.26	0.26	Decommission, Closure Level 3DN.
37541	0.00	0.62	0.62	
37542	0.00	0.26	0.26	
388	5.27	9.54	4.27	
61255	0.00	2.20	2.20	
61267	0.00	0.80	0.80	
61268	0.00	0.61	0.61	
7763	0.00	3.60	3.60	
7766	0.00	4.85	4.85	
7770	1.56	2.76	1.21	Store, Closure Level 3S.
7770	0.00	1.56	1.56	
7803	2.57	6.08	3.50	
7807	6.91	8.84	1.93	Store, Closure Level 3S.
7807	0.00	6.91	6.91	
7822	0.00	4.34	4.34	
7822	4.34	8.01	3.67	
7823	0.00	0.80	0.80	Open to closed yearlong (Map Code B)
7823	0.80	1.89	1.09	Open to closed yearlong (Map Code B)
7825	0.00	1.98	1.98	
7829	0.00	4.28	4.28	
7836	0.00	8.38	8.38	

Road No.	BMP	EMP	Length	Management Action[1]
7857	0.00	0.49	0.49	
7863	0.00	0.20	0.20	
7863	2.65	3.03	0.38	
7863	0.20	4.84	4.64	
7863	4.84	6.11	1.28	
7864	0.00	0.35	0.35	Decommission, Closure Level 3D*.
7864	0.35	1.87	1.52	
7865	8.13	10.44	2.31	Store, Closure Level 3S.
7865	10.44	12.60	2.16	Store, Closure Level 3S.
7865	0.00	8.13	8.13	
J70156	0.00	0.67	0.67	Decommission, Closure Level 3DN.
J70157	0.00	0.33	0.33	Decommission, Closure Level 3DN.
J70158	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70159	0.00	0.53	0.53	Decommission, Closure Level 3DN.
J70160	0.00	0.33	0.33	Decommission, Closure Level 3DN.
J70161	0.00	0.32	0.32	Decommission, Closure Level 3DN.
J70162	0.00	0.22	0.22	Decommission, Closure Level 3DN.
J70163	0.00	0.79	0.79	Decommission, Closure Level 3DN.
J70164	0.00	0.37	0.37	Decommission, Closure Level 3DN.
J70165	0.00	0.62	0.62	Decommission, Closure Level 3DN.
J70166	0.00	0.90	0.90	Retain for Private Access.
J70167	0.00	0.46	0.46	Decommission, Closure Level 3DN.
J70168	0.00	0.36	0.36	Decommission, Closure Level 3DN.
J70169	0.00	0.85	0.19	Decommission, Closure Level 3D*.
J70170	0.00	0.28	0.28	Decommission, Closure Level 3D*.
J70171	0.00	0.19	0.19	Decommission, Closure Level 3D*.
J70172	0.00	0.40	0.40	Decommission, Closure Level 3DN.
J70173	0.00	0.16	0.16	Decommission, Closure Level 3DN.
J70174	0.00	0.33	0.33	Decommission, Closure Level 3DN.
J70175	0.00	0.21	0.21	Decommission, Closure Level 3DN.
J70176	0.00	1.63	1.63	Decommission, Closure Level 3DN.
J70177	0.00	0.79	0.79	Decommission, Closure Level 3DN.
J70178	0.00	1.01	1.01	Decommission, Closure Level 3D.
J70179	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70180	0.00	0.45	0.45	Decommission, Closure Level 3D*.
J70181	0.00	0.52	0.52	Decommission, Closure Level 3DN.
J70182	0.00	0.62	0.62	Decommission, Closure Level 3DN.
J70183	0.00	0.29	0.29	Decommission, Closure Level 3DN.
J70184	0.00	0.28	0.28	Decommission, Closure Level 3DN.
J70185	0.00	0.73	0.73	Decommission, Closure Level 3D.

Road No.	BMP	EMP	Length	Management Action[1]
J70186	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70200	0.00	0.48	0.48	Decommission, Closure Level 3DN.
J70201	0.00	0.66	0.66	Decommission, Closure Level 3DN.
J70202	0.00	0.39	0.39	Decommission, Closure Level 3DN.
J70203	0.00	0.32	0.32	Decommission, Closure Level 3DN.
J70204	0.00	0.39	0.39	Decommission, Closure Level 3DN.
J70205	0.00	0.44	0.44	Decommission, Closure Level 3D*.
J70206	0.00	0.81	0.81	Decommission, Closure Level 3DN.
J70207	0.00	0.55	0.55	Decommission, Closure Level 3DN.
J70208	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70209	0.00	0.28	0.28	Decommission, Closure Level 3DN.
J70210	0.26	0.50	0.24	Decommission, Closure Level 3D*.
J70210	0.00	0.26	0.26	Decommission, Closure Level 3DN.
J70211	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70212	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70213	0.00	0.17	0.17	Decommission, Closure Level 3DN.
J70214	0.00	0.02	0.02	Decommission, Closure Level 3DN.
J70215	0.00	0.42	0.42	Decommission, Closure Level 3D.
J70216	0.00	0.23	0.23	Decommission, Closure Level 3D.
J70217	0.00	0.84	0.84	Decommission, Closure Level 3DN.
J70218	0.00	0.21	0.21	Decommission, Closure Level 3DN.
J70219	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70220	0.00	2.84	2.84	Decommission, Closure Level 4.
J70221	0.00	1.72	1.72	Decommission, Closure Level 5.
J70222	0.00	0.63	0.63	Decommission, Closure Level 3D*.
J70223	0.00	0.76	0.76	Decommission, Closure Level 5.
J70224	0.00	0.29	0.29	Decommission, Closure Level 5.
J70225	0.00	0.55	0.55	Decommission, Closure Level 3D*.
J70226	0.00	0.26	0.26	Decommission, Closure Level 3D*.
J70227	0.00	0.10	0.10	Decommission, Closure Level 3D*.
J70228	0.00	0.37	0.37	Decommission, Closure Level 3D*.
J70229	0.00	0.23	0.23	Decommission, Closure Level 3D*.
J70230	0.00	0.26	0.26	Decommission, Closure Level 3DN.
J70231	0.00	0.50	0.50	Decommission, Closure Level 3DN.
J70232	0.00	0.42	0.42	Decommission, Closure Level 3DN.
J70233	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70234	0.00	0.18	0.18	Decommission, Closure Level 3DN.
J70235	0.00	0.21	0.21	Decommission, Closure Level 3D*.
J70236	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70237	0.00	0.30	0.30	Decommission, Closure Level 3DN.

Road No.	BMP	EMP	Length	Management Action[1]
J70238	0.00	0.35	0.35	Decommission, Closure Level 3DN.
J70239	0.00	0.52	0.52	Decommission, Closure Level 3DN.
J70240	0.00	0.33	0.33	Decommission, Closure Level 3DN.
J70241	0.00	0.24	0.24	Decommission, Closure Level 3D*.
J70242	0.00	0.39	0.39	Decommission, Closure Level 3DN.
J70243	0.00	0.43	0.43	Decommission, Closure Level 3DN.
J70244	0.00	0.27	0.27	Decommission, Closure Level 3DN.
J70245	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70246	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70247	0.00	0.48	0.48	Decommission, Closure Level 3DN.
J70248	0.00	1.08	1.08	Decommission, Closure Level 3DN.
J70249	0.00	0.06	0.06	Decommission, Closure Level 3DN.
J70250	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70251	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70252	0.00	0.37	0.37	Decommission, Closure Level 3DN.
J70253	0.00	0.11	0.11	Decommission, Closure Level 3DN.
J70254	0.00	0.67	0.67	Decommission, Closure Level 3DN.
J70255	0.00	0.62	0.62	Decommission, Closure Level 3DN.
J70256	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70257	0.00	0.22	0.22	Decommission, Closure Level 3DN.
J70258	0.00	0.30	0.30	Decommission, Closure Level 3DN.
J70259	0.00	0.23	0.23	Decommission, Closure Level 3D.
J70260	0.00	0.20	0.20	Decommission, Closure Level 3D.
J70261	0.00	0.11	0.11	Decommission, Closure Level 3D.
J70262	0.00	0.20	0.20	Decommission, Closure Level 3D.
J70263	0.00	0.33	0.33	Decommission, Closure Level 3D*.
J70264	0.00	0.17	0.17	Decommission, Closure Level 3DN.
J70265	0.00	0.17	0.17	Decommission, Closure Level 3D.
J70266	0.00	0.13	0.13	Decommission, Closure Level 3DN.
J70267	0.00	0.17	0.17	Decommission, Closure Level 3DN.
J70268	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70269	0.00	0.17	0.17	Decommission, Closure Level 3DN.
J70270	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70271	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70272	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70273	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70274	0.00	0.22	0.22	Decommission, Closure Level 3DN.
J70275	0.00	0.18	0.18	Decommission, Closure Level 3DN.
J70276	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70277	0.00	0.24	0.24	Decommission, Closure Level 3DN.

Road No.	BMP	EMP	Length	Management Action[1]
J70278	0.00	0.63	0.63	Decommission, Closure Level 3DN.
J70279	0.00	0.41	0.41	Decommission, Closure Level 3D.
J70280	0.00	0.38	0.38	Decommission, Closure Level 3D.
J70281	0.00	0.36	0.36	Decommission, Closure Level 3DN.
J70282	0.00	0.40	0.40	Decommission, Closure Level 3DN.
J70283	0.00	0.13	0.13	Decommission, Closure Level 3DN.
J70284	0.00	0.22	0.22	Decommission, Closure Level 3DN.
J70285	0.00	0.21	0.21	Decommission, Closure Level 3DN.
J70286	0.00	0.30	0.30	Decommission, Closure Level 3DN.
J70287	0.00	0.15	0.15	Decommission, Closure Level 3DN.
J70288	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70289	0.00	1.10	1.10	Decommission, Closure Level 3D.
J70290	0.00	0.19	0.19	Decommission, Closure Level 3D.
J70291	0.00	0.36	0.36	Decommission, Closure Level 3DN.
J70292	0.00	0.33	0.33	Decommission, Closure Level 3DN.
J70293	0.00	0.25	0.25	Decommission, Closure Level 3DN.
J70294	0.00	0.79	0.79	Decommission, Closure Level 3DN.
J70295	0.00	0.50	0.50	Decommission, Closure Level 3DN.
J70296	0.00	0.34	0.34	Decommission, Closure Level 3DN.
J70297	0.00	0.66	0.66	Decommission, Closure Level 3DN.
J70298	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70299	0.00	0.96	0.96	Decommission, Closure Level 3DN.
J70300	0.00	0.22	0.22	Decommission, Closure Level 3DN.
J70301	0.00	0.11	0.11	Decommission, Closure Level 3DN.
J70302	0.00	0.13	0.13	Decommission, Closure Level 3DN.
J70303	0.00	0.15	0.15	Decommission, Closure Level 3DN.
J70304	0.00	0.07	0.07	Decommission, Closure Level 3DN.
J70305	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70306	0.00	0.15	0.15	Decommission, Closure Level 3DN.
J70307	0.00	0.07	0.07	Decommission, Closure Level 3DN.
J70308	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70309	0.00	0.20	0.20	Decommission, Closure Level 3DN.
J70310	0.00	0.19	0.19	Decommission, Closure Level 3DN.
J70311	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70312	0.00	0.18	0.18	Decommission, Closure Level 3DN.
J70313	0.00	0.16	0.16	Decommission, Closure Level 3DN.
J70314	0.00	0.11	0.11	Decommission, Closure Level 3DN.
J70315	0.00	0.09	0.09	Decommission, Closure Level 3DN.
J70316	0.00	0.05	0.05	Decommission, Closure Level 3DN.
J70317	0.00	0.06	0.06	Decommission, Closure Level 3DN.

Road No.	BMP	EMP	Length	Management Action[1]
J70318	0.00	0.31	0.31	Decommission, Closure Level 3DN.
J70319	0.00	1.60	1.60	Decommission, Closure Level 3DN.
J70320	0.00	0.20	0.20	Decommission, Closure Level 3DN.
J70321	0.00	0.31	0.31	Decommission, Closure Level 3DN.
J70323	0.00	0.04	0.04	Decommission, Closure Level 3DN.
J70324	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70325	0.00	0.17	0.17	Decommission, Closure Level 3DN.
J70326	0.00	0.07	0.07	Decommission, Closure Level 3DN.
J70327	0.00	0.21	0.21	Decommission, Closure Level 3DN.
J70328	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70329	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70330	0.00	0.16	0.16	Decommission, Closure Level 3DN.
J70331	0.00	0.17	0.17	Decommission, Closure Level 3DN.
J70332	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70332	0.00	0.23	0.23	Decommission, Closure Level 3DN.
J70333	0.00	4.64	4.64	Decommission, Closure Level 3DN.
J70334	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70335	0.00	0.41	0.41	Decommission, Closure Level 3DN.
J70336	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70337	0.00	0.13	0.13	Decommission, Closure Level 3DN.
J70338	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70339	0.00	0.19	0.19	Decommission, Closure Level 3DN.
J70340	0.00	0.32	0.32	Decommission, Closure Level 3DN.
J70341	0.00	0.13	0.13	Decommission, Closure Level 3DN.
J70342	0.00	0.11	0.11	Decommission, Closure Level 3DN.
J70343	0.00	0.18	0.18	Decommission, Closure Level 3DN.
J70344	0.00	0.33	0.33	Decommission, Closure Level 3DN.
J70345	0.00	0.22	0.22	Decommission, Closure Level 3DN.
J70346	0.00	0.62	0.62	Decommission, Closure Level 3DN.
J70347	0.00	0.19	0.19	Decommission, Closure Level 3DN.
J70348	0.00	0.51	0.51	Decommission, Closure Level 3DN.
J70349	0.00	0.24	0.24	Decommission, Closure Level 3D*.
J70350	0.00	0.07	0.07	Decommission, Closure Level 3DN.
J70351	0.00	0.99	0.99	Decommission, Closure Level 3D*.
J70352	0.00	0.12	0.12	Decommission, Closure Level 3D*.
J70353	0.00	0.26	0.26	Decommission, Closure Level 3D*.
J70354	0.00	0.19	0.19	Decommission, Closure Level 3D*.
J70355	0.00	0.17	0.17	Decommission, Closure Level 3D*.
J70356	0.00	0.37	0.37	Decommission, Closure Level 3D*.
J70357	0.00	0.16	0.16	Decommission, Closure Level 3D*.

Road No.	BMP	EMP	Length	Management Action[1]
J70358	0.00	0.26	0.26	Decommission, Closure Level 3D*.
J70359	0.00	0.51	0.51	Decommission, Closure Level 3D*.
J70360	0.00	0.14	0.14	Decommission, Closure Level 3D*.
J70361	0.00	0.48	0.48	Decommission, Closure Level 3D*.
J70362	0.00	0.39	0.39	Decommission, Closure Level 3D*.
J70363	0.00	0.19	0.19	Decommission, Closure Level 3D*.
J70364	0.00	0.14	0.14	Decommission, Closure Level 3D*.
J70365	0.00	0.09	0.09	Decommission, Closure Level 3D*.
J70366	0.00	0.28	0.28	Decommission, Closure Level 3D*.
J70367	0.00	0.32	0.32	Decommission, Closure Level 3D*.
J70368	0.00	0.40	0.40	Decommission, Closure Level 3D*.
J70369	0.00	0.21	0.21	Decommission, Closure Level 3D*.
J70370	0.00	0.07	0.07	Decommission, Closure Level 3D*.
J70371	0.00	0.56	0.56	Decommission, Closure Level 3D*.
J70372	0.00	0.44	0.44	Decommission, Closure Level 3D*.
J70373	0.00	0.30	0.30	Decommission, Closure Level 3D*.
J70374	0.00	0.84	0.84	Decommission, Closure Level 3D.
J70375	0.00	0.84	0.84	Decommission, Closure Level 3D.
J70376	0.00	0.37	0.37	Decommission, Closure Level 3D.
J70377	0.00	0.48	0.48	Decommission, Closure Level 3D*.
J70378	0.00	0.20	0.20	Decommission, Closure Level 3D*.
J70379	0.00	0.55	0.55	Retain for Private Access.
J70380	0.00	0.95	0.95	Decommission, Closure Level 3D*.
J70381	0.00	0.18	0.18	Decommission, Closure Level 3DN.
J70382	0.00	0.39	0.39	Decommission, Closure Level 3D*.
J70383	0.00	0.27	0.27	Decommission, Closure Level 3D*.
J70384	0.00	0.27	0.27	Decommission, Closure Level 5.
J70386	0.00	0.05	0.05	Decommission, Closure Level 3DN.
J70387	0.00	0.72	0.72	Decommission, Closure Level 3DN.
J70388	0.00	0.11	0.11	Decommission, Closure Level 3DN.
J70389	0.00	0.12	0.12	Decommission, Closure Level 3DN.
J70390	0.00	0.19	0.19	Decommission, Closure Level 3DN.
J70391	0.00	0.13	0.13	Decommission, Closure Level 3DN.
J70392	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70393	0.00	0.16	0.16	Decommission, Closure Level 3DN.
J70394	0.00	0.08	0.08	Decommission, Closure Level 3DN.
J70395	0.00	0.14	0.14	Decommission, Closure Level 3DN.
J70396	0.00	0.27	0.27	Decommission, Closure Level 3DN.
J70397	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70398	0.00	0.15	0.15	Decommission, Closure Level 3DN.

Road No.	BMP	EMP	Length	Management Action[1]
J70399	0.00	0.10	0.10	Decommission, Closure Level 3DN.
J70405	0.00	0.15	0.15	Decommission, Closure Level 3DN.
J70407	0.00	0.29	0.29	Decommission, Closure Level 3DN.
J70408	0.00	0.34	0.34	Decommission, Closure Level 3D*.
J70410	0.00	0.76	0.76	Decommission, Closure Level 4.
J70411	0.00	0.15	0.15	Decommission, Closure Level 4.
J70412	0.00	0.08	0.08	Decommission, Closure Level 3D*.
J70413	0.00	0.11	0.11	
J70414	0.00	0.31	0.31	Decommission, Closure Level 3D*.
J70415	0.00	0.69	0.69	Decommission, Closure Level 4.
J70416	0.00	0.38	0.38	Decommission, Closure Level 4.
J70417	0.00	0.08	0.08	Decommission, Closure Level 3D*.
J70418	0.00	0.17	0.17	Decommission, Closure Level 3D*.
J70419	0.00	0.12	0.12	Decommission, Closure Level 3D*.
J70420	0.00	0.20	0.20	Decommission, Closure Level 3D*.
J70421	0.00	0.15	0.15	Decommission, Closure Level 4.

[1]Level of closure could vary depending on site-specific conditions found at the time of implementation.

Road storage and decommissioning treatments will be implemented when funding becomes available. Where these roads are used to access vegetation treatment areas, timing of road closure will also be depend on when treatments are completed.

Culvert Replacements
Nine culverts will be replaced when funding becomes available. These culverts are listed in the table below according to their priority.

Culvert Replacements Listed by Priority

Priority for Replacement	Stream Name, Road Number
1	Oregon Gulch, Road 320
2	Parent Creek, Road 7865
3	Cayuse Creek, Road 7807 (2 culverts)
4	California Gulch, Road 388
5	MaryAnn Gulch, Road 320
6	Pierson Creek, Road 7865
7	White Gulch, Road 7865
8	California Gulch, Road 16124

Stream Rehabilitation Work

California Gulch: The purpose of this activity is to rehabilitate several areas of California Gulch that have been impacted by an old mining road and historic mining activities in the stream. The stream currently runs down the existing road/trail in several locations and an old log crib dam has caused stream aggradation and loss of complex fish habitat. The project

would involve removal of a wooden box culvert that is failing, along with rehabilitation of the stream for approximately 100 feet, installation of waterbars along the road/trail, and removal of a log crib dam and rehabilitation of the stream at this site.

Lost Creek: The purpose of this activity is to rehabilitate approximately 1000 feet of Lost Creek that has been historically affected by placer mining activities. The stream channel has been moved over to one side of the valley bottom and channelized, leaving no connection to the floodplain. Lower in the affected reach, rock piles from placer mining located in the floodplain also constrict the channel. The reach is lacking large woody debris to create pools and overstory vegetation to provide shading and hiding cover for fish. This rehabilitation would involve the removal of placer mining rock piles that constrict the channel and floodplains, realignment of the channel where it has historically been moved to allow for floodplain connectivity, reestablishment of natural channel and floodplain dimensions, installation of large woody debris and planting riparian vegetation.

Oregon Gulch (Big Flat Area): The purpose of this activity is to reestablish a floodplain and plant riparian vegetation along approximately 200 feet of Oregon Gulch where placer mining rock piles are constricting the natural channel and floodplain. The project would move the rock piles away from the stream channel to construct a small floodplain for approximately 200-300 feet. Riparian vegetation would then be planted along the newly constructed floodplain to help stabilize the area. Several large trees from the area would be placed strategically in Oregon Gulch in the area of disturbance to help create fish habitat.

APPENDIX D

Lolo National Forest Plan Amendment #40

October 2014

This amendment allows timber harvest in three treatment areas (Units 14, 15, and 17) proposed to reduce hazardous fuels and restore ponderosa pine forest types adjacent to private land and residences (see attached map). Together, these three units are approximately 183 acres in size and are within an area allocated in the Forest Plan to be managed as large blocks of roadless lands where tree cutting is "limited to that required to eliminate safety hazards or permit trail construction." The trees designated for removal within these units will be extracted with a helicopter and no roads will be constructed. This area is located within the wildland urban interface and identified within the Mineral County Community Wildfire Protection Plan as a high priority for fuels reduction treatment. The Forest Plan currently allows prescribed burning within this area "to restore the composition and structure of plant communities or for hazard reduction purposes" (Lolo Forest Plan, page III-33). However, the risk is unacceptably high to burn this area due to its current condition and location. Timber harvest will instead be used as the tool to achieve the same objectives.

This has been determined to be a non-significant amendment to the Lolo National Forest Plan.